THE ARCHITECTURAL FORUM

FOR QUARTER CENTURY THE BRICKBUILDER

JANUARY 1917

DEVOTED TO THE ART AND SCIENCE OF BUILDING

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THE ARCHITECTURAL FORUM

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LETTERPRESS

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RUINS OF THE CLOTH HALL, OR HALLE AUX DRAPS, AT YPRES, BELGIUM

AFTER AN ETCHING BY GEORGE T. PLOWMAN

THE Halle aux Draps was, before its destruction, the largest and most important building in Belgian Flanders. Its lower floor was a public market, with a hall above used for large gatherings. It was justly considered one of the finest works of Belgian Gothic architecture. The small illustration shows its appearance before the present war.

THE ARCHITECTURAL FORUM
FOR QUARTER CENTURY THE BRICKBUILDER
VOLUME XXVI JANUARY, 1917 NUMBER 1

The New Zoning Ordinance of New York City

RESTRICTIONS THAT MARK AMERICA'S GREATEST STEP IN CITY PLANNING ARE NOW IN FULL EFFECT

By LOUIS GRAVES

AN old familiar saying is that God made the country and man made the town. Some of the people who have made a study of congestion of population, whose work has taken them to the wretched slums of the cities, would probably amend it and say the devil made the town. At any rate, the job has been badly done, and now civilization must set about to see that it is done better in the future. Haphazard building has been a blow to the health and economic development and beauty of many a community. But it need be so no more. A new way has been pointed out, and the dwellers in cities may take it if they will.

Long ago European communities placed restrictions on building development. A few American cities — Boston, Washington, Los Angeles, and others — have imposed limitations on height and have created residence districts. But on this side of the world it has remained for New York to undertake and carry through to success a thoroughgoing scheme of regulation — a scheme that takes account of the years to come and embodies the principles of that still unfamiliar art-science known as city planning.

Where other cities have laid down comparatively simple rules, fixing height limits in certain broadly defined sections, and drawing lines to separate homes from industry, New York has created what are in effect hundreds of districts, in each of which all buildings erected in the future must be in accordance with regulations based upon three factors: use, height, and area. That is, it has treated its territory street by street and block by block; and in each particular instance it has made its rules conform to present and probable future conditions.

This does not mean that the city, from preference, has laid out residence and business districts in the form of frequently alternating strips. Such a course it has sought to avoid. Wherever possible a large section has been dedicated to buildings of a certain class. Notably is this true in the parts of the city that are not yet built up; and on both sides of Central Park, where the cross streets are lined with homes, residential development over wide areas receives official sanction and protection. But in a town as old and as unevenly built as New York, all the divisions could not be so broadly made. Thus, one sees Washington Square and its purlieus decreed a residential oasis in a desert of trade; and, likewise, lower Park avenue, some of the other streets in the fashionable Murray Hill neighborhood, and blocks south of Central Park, have been saved from the invasion of factories and shops.

Not only in fixing business and residence districts has the city inclined toward flexibility, — toward a recognition of practical considerations,— but also in laying out height districts and in regulating the height, shape, and area of all buildings.

Vast boxlike structures may not rise above a certain height; but a tower, if it occupies only a specified proportion of the area, may go as high as its owner wants to carry it. In an up-town section where the construction of lofts is the logical development, buildings may rise to a height equal to two times the width of the street; but half a mile away on Fifth avenue, where it is imperative that the character of a high-class shopping and hotel neighborhood be maintained, the limit is one and one-quarter, or, on some of the blocks, one and one-half times the width of the street. In a warehouse block the space required to be devoted to yards and courts may be zero; but in a business block perhaps not a hundred yards distant there must be yard and court space adequate to afford plentiful light and air. And so it goes: the requirements show wide variations even within a small area.

This statement of the way the scheme works might carry to the thoughtless the impression of arbitrariness on the part of the city government. But nothing is farther from the fact. The rules were not made by a group of men who gathered around two or three times, listened to a city engineer, pointed to places on a map, and said: "We shall have such-and-such a street for business, and such-and-such a street for homes." On the contrary, the decisions resulted from a painstaking methodical survey by a staff of experts, from a study of the character of buildings on every single block, and the course of development for many years past; and, finally, from consultation with the property owners and residents vitally affected. Every minute the men in charge of the work had in mind the necessity for care and conservatism; for they knew that not only would their recommendations have to stand the test of public opinion, but also, in all probability, the more definite test of a contest in the courts.

THE PLAN OF REGULATION. Though complex in detail, the plan put into effect by the Board of Estimate and Apportionment, New York City's main governing body, is simple enough in outline and in the principle it involves. In brief, it seeks to promote the safety, the health, the comfort and convenience, and the general welfare of the population by imposing reasonable restrictions upon the use of private property. To accomplish this, the Board of Estimate's resolution creates (1) use districts, (2) height districts, and (3) area districts.

The use districts are divided into four classes: residence, business, unrestricted, and undetermined. The height districts are divided according to the allowed height on the street line in comparison with the width of the street; they are known as one times, one and one-quarter times, one and one-half times, two times, and two and one-half times districts. The area districts are divided into five classes, A, B, C, D, and E, with varying requirements as to the size of open spaces that must be provided.

Instead of describing in words the numerous districts created, the Board of Estimate simply made the district maps a part of the resolution. These maps are designated as the "Use District Map," the "Height District Map," and the "Area District Map." In each of them are employed symbols to indicate either a lack of any restrictions or the exact kind of restriction imposed upon buildings in every street in the city. Thus, from these maps one may learn at a glance within just what classification any street or any part of a street belongs.

The new regulations do not affect, either as to height or use or area, existing buildings or those for which plans were filed prior to July 25, 1916, provided that the construction of planned buildings shall proceed within a specified time.

That a city grows and changes, and that no hard and fast fixed rules should be laid down to determine the nature of its growth for all time, is a truth that has been thoroughly recognized in New York. Therefore, methods of modifying the present regulations are established. The law pursuant to which the regulations were made directs that citizens may petition for modifications, and that the governing body of the city shall consider and vote upon such requests. Furthermore, authority is given to the Board of Standards and Appeals to vary, in a particular case, any provision "in harmony with its general purpose and intent." The same board is empowered to grant, when circumstances justify, certain exceptions to the use district regulations.

Restrictions in Use. In the streets reserved for residences no kind of business or industry is permitted, but only dwellings, apartment houses, boarding houses, clubs, hotels, and such institutional buildings as churches and hospitals. A garage is permitted if it is on the same plot with the building which it serves. There is nothing in the regulations to keep residences out of business districts; and some industries, if they are not of a specified objectionable kind and do not occupy more than a certain proportion of the floor space of their building, may also be located here. Unrestricted districts are sufficiently described in their name. With regard to undetermined districts, the decision as to the character of buildings to be allowed will be made at some later time.

Generally speaking, no restrictions as to use have been put upon the land along the navigable water front where conditions are favorable to industrial development (the unrestricted area extends back 1,000 feet or more from the water). It is regarded as certain that the segregation of factories will not only improve residential conditions, but also, by the reduction of trucking and the provision of the best transportation and terminal facilities, reduce manufacturing costs. Another beneficial result will be the decreased volume of trucking through streets where children are at play.

The reason that the natural working of economic forces has not sufficed to keep factories away from the shopping and residential districts is that in New York industry takes the form of what is often called "light manufacturing." Plants for the production of locomotives, steel rails, structural steel, and heavy machinery are not numerous in New York compared with the establishments for the making of clothing, confectionery, buttons, millinery and lace, patent medicines, artificial flowers, books and magazines, and other articles that do not have to be fabricated in proximity to extensive water and rail terminals. Almost two-thirds of the 680,000 industrial workers in the city were found by the Commission on Building Districts and Restrictions to be employed in connection with this so-called light manufacturing.

These industries have scattered themselves over the city without regard to any plan whatever. One factory has often sufficed to destroy the residential advantages of an entire block. The extension of the factory zone between the years 1900 and 1915 drove hotels and shops from the part of the city around 23d street, and was about to have a like disastrous effect in the neighborhood of 34th street when the present scheme for regulation came to the rescue. Now protection is afforded to Fifth avenue from 23d street to 59th street, and northward on each side of Central Park where residences predominate; large and adequate areas are still left for factories to the east of Fourth and Park avenues and to the west of Sixth avenue and Broadway.

An illustration of the care taken to avoid causing undue inconvenience is the provision for including in the business districts short stretches at the end of residence blocks, adjacent to the main traffic thoroughfares; in a great number of cases these stretches are already used by tailors, laundrymen, shoemakers, and small tradesmen.

A powerful consideration in determining the limits of the use districts was the necessity of promoting safety to street traffic. In New York most of the children are forced to play on the streets, and in blocks invaded by business the danger of accidents is far greater than it is in the exclusively residential blocks. This was definitely established by the examination of police records and through independent investigations. Not only do children run the risk of being hurt in streets where there is heavy vehicular traffic, but their mental and moral life is shown to be unfavorably affected by proximity to industry and trade. An official of the Children's Court in New York has offered testimony that the lack of opportunity for play is responsible for nearly half of the cases of juvenile delinquencies. Though the city is making every effort to provide playgrounds, there is no chance that there will be enough of these open spots for a long time to come, and so the streets must be made as safe as possible.

Height Limits. As in the segregation of factories, in imposing height limits the city faced the accusation of discriminating in favor of owners who had already improved their property intensively and against owners who had not. It was a delicate problem, the solution of which was found in the separation of the city into height districts, the limit being made much more liberal in the sections where skyscrapers already existed than in those where this kind of development had not yet got under way.

In the lower end of Manhattan the street wall may rise to a height of two and one-half times the width of the street, and, for the purposes of this rule, no street is to be counted as less than 50 feet wide. Beyond the limit on the street line the building may go higher if it sets back from the street line 1 foot horizontally for every 5 feet vertically; or it may go higher even on the street line, provided that the part above does not occupy more than a certain proportion of the area of the lot, and is not on the street line for more than a certain proportion of the frontage of the entire building. The effect of this provision is to permit towers of almost any practicable height.

The same principle is applied in all other height districts — two times, one and one-half times, one and one-fourth times, and one times districts — except that as the height limit decreases from class to class there goes an increase in the horizontal setback in the upper portion of the building. This means that the requirements are less severe in the industrial and business sections of the city than in other sections. It is, in a way, a concession to the necessity of not disturbing too radically the conditions that have already prevailed. In the interest of the conservation of real estate values, light and air must be sacrificed, to an extent, in the lower part of Manhattan; but where the land has not been so crowded with skyscrapers the city may, without being charged with confiscatory intentions, apply more rigid restrictions.

In the height limit regulations throughout, precaution is taken not to interfere with architectural treatment. Cornices may extend out from the street walls 5 feet, and "nothing shall prevent the erection, above the height limit, of a parapet wall or cornice solely for ornament and without windows," providing this does not rise more than 5 per cent above the height limit. Church spires and belfries are not subject to any restriction as to height. Again, dormers and head-houses may be erected above the height limit, subject to a limitation upon their aggregate frontage.

Area Districts. The purpose underlying the area limitations is to afford sufficient light and air to the occupants of buildings. Except in A districts, which are located along the water front and near railroad terminals, any building that runs 55 feet back from the street, and is back to back with another property, must have a rear yard. The depth and height of the yard must increase with the height of the building; and the same rule applies to courts. There is a multiplicity of detail in the rules and the exceptions thereto governing the height and depth of yards and courts, but every provision points to one object: plentiful light and air.

A City Choking Itself to Death. I have sought, in the preceding paragraphs, to state in condensed form the purpose and the main features of New York's new scheme of building regulation. The student desiring a closer knowledge of its details will necessarily have to go to the text of the resolution and to the reports of the experts who were engaged for three years in performing this intricate task. But I take it that public spirited men and women elsewhere than in New York, who want to see their own cities grow sanely and beautifully, will be less interested in the exact language of the regulations than in a general view of the problem that faced New York, and of the way in which that problem was attacked and solved. For here, truly, lies the real lesson for other communities.

Three years ago New York was aptly described as a great city that was letting itself be choked to death. In the quarter of a century that had passed since the erection of the first lofty steel-frame building on lower Broadway, it had seen these structures grow in both number and size. The first, which had only ten stories, was considered monstrously high, and many engineers and architects said it was dangerous. But it was a pygmy beside those that followed. They went up thirty, forty, fifty stories high. Many of them had no pretense to shapeliness, but were just gigantic boxes with rows and rows of windows all alike, while others approached the sky in the form of towers at once magnificent and graceful. The will of the owner was the only law that governed height and design.

The skyline of Manhattan has become famous the world over, and indeed it is one of the most impressive of all sights. But as the city, seen in profile, grew in picturesqueness and grandeur, the downtown streets were turned into canyons; light and air were shut off from windows, and traffic became more and more congested.

It was not long after skyscrapers appeared in lower Manhattan that they began to scatter all over the island— and even in the boroughs of Brooklyn and the Bronx. They sprang up in the most unexpected places, to the dismay of the owners and lessees of the surrounding plots; in fact, the absence of other high buildings often provided an incentive to the man who wanted to put up one, for it meant that he would have light and air on all sides. These invaders had all the characteristics of parasites and pirates.

Thoughtful citizens who were concerned for the future of New York soon realized that this abnormal development was full of evil promise. Many of them said so; but, as usual, the public as a whole was slow to see. Most New Yorkers seemed to be rather proud of the skyscrapers than otherwise — not proud of the beauty of a few, but of the mere bigness and startling quality of them all. But gradually there came to be more and more talk about the limiting of heights, stimulated by the ever growing number and diffusion of the skyscrapers. Probably it was the erection of loft buildings around 23d street, and the conversion of that district into a manufacturing center, that had most effect upon the public mind. People who had pooh-poohed the warnings of the "alarmists" of a few years past were frightened now by the prospect of factories taking possession of Murray Hill.

The Movement's Official Champion. It was in the person of George McAneny, President of the Borough of Manhattan, that the movement for building regulation found its most powerful advocate in official circles. His activity in civic work for many years had given Mr. McAneny a keen appreciation of the harm of unrestricted building; and with the zeal of a citizen who wanted to see New York develop in healthfulness and beauty as well as size, he combined the hard common sense that saw in their true light the serious economic aspects of the situation. He was not afraid to face the awful charge of being a "faddist" — a charge that so-called practical politicians, and often business men, bring against any man who proposes something which, however well tried out in other lands, happens to be unfamiliar to them.

By virtue of his office he was a member of the Board of Estimate and Apportionment, the body of eight men who hold the reins of government in New York City. He succeeded in impressing his own convictions upon his associates, and on Feb. 27, 1913, the Board adopted a resolution creating a Heights of Buildings Committee with Mr. McAneny as Chairman; and he, in pursuance of the terms of the resolution, immediately appointed the Heights of Buildings Advisory Commission. There has probably never been any group of citizens formed for such a purpose more deserving of public gratitude for their tireless and thorough work, and certainly in an article of this character they should receive full credit. Therefore I present their names as follows: Edward M. Bassett (Chairman), Edward C. Blum, Edward W. Brown, William H. Chesebrough, William A. Cokeley, Otto M. Eidlitz, Abram I. Elkus, Burt L. Fenner, J. Monroe Hewlett, Robert A. Higbie, C. Grant La Farge, Nelson P. Lewis, George T. Mortimer, Lawson Purdy, Allan Robinson, August F. Schwarzler, Franklin S. Tomlin, Lawrence Veiller, and Gaylord S. White. The expert staff consisted of George B. Ford, Robert H. Whitten, Herbert S. Swann, Frank B. Williams, and A. E. Heffelfinger.

The commission conducted a comprehensive investigation, extending over several months. It sought and obtained advice from owners and managers of buildings, architects and insurance men, fire fighters and fire protection experts, lawyers and physicians, manufacturers and railroad men, and students of conditions in the tenement districts. It had special investigations made in cities of the United States, Canada, and Europe, and held a series of public hearings in City Hall.

THE NEED OF DISTRICTING. Now, perhaps the most significant fact about the outcome of the studies of this commission was that they declared that the limitation of heights was only part, and not necessarily the greatest part, of building regulation. They were convinced that no scheme of regulation would really meet the needs of the city except one that was based upon districting as to use, height, and area. So they made most careful inquiry into the practicability of this more ambitious plan, reviewing the efforts of other cities and the attitude of the courts as reflected in numerous decisions.

The result of this particular phase of their work was the drafting of two new sections to be added to the Charter of the City of New York. These sections, known as 242-A and 242-B, were later passed by the Legislature and signed by the Governor. It is not necessary to quote all of their six or seven hundred words. What they accomplish is simply this: They give the Board of Estimate power to regulate the height of buildings, determine the proportion of a lot which must be left open, and "divide the city into districts of such number, shape, and area" as will best carry out the purpose of properly restricting the location of trades and industries. The new law then proceeds to say that the regulations "shall be designed to promote the public health, safety, and general welfare," and provides for public hearings and other formalities.

Their study of the legal questions involved had convinced the members of the commission that New York City could not hope to achieve a thoroughly satisfactory system of building until the enactment of the proposed law. Accordingly the Heights of Building Commission had presented its report, embodying the result of its extensive investigations and had gone out of existence. Within a month after the charter amendment was enacted the Board of Estimate appointed the Commission on Building Districts and Restrictions. This body included, of the former commission, Messrs. Bassett (again Chairman), Blum, Eidlitz, Fenner, Purdy, and Tomlin; and, in addition, James E. Clonin, Edward R. Hardy, Richard W. Lawrence, Alrick H. Man, Alfred E. Marling, J. F. Smith, Walter Stabler, George C. Whipple, and William G. Willcox. Of the former expert staff, Messrs. Ford, Whitten, and Swann remained in service, and there were added John P. Fox, George W. Tuttle, and Edward M. Law.

In many respects the work of the new commission was more engrossing than that of the old, and it touched more nearly the daily life of the average citizen. Before, the benefits to be gained had been easy enough to set forth, but the individual citizen had not seen very clearly what they would have to do with himself and his family; now, on the contrary, the decrees of the new commission would have a vital effect upon the very house he lived in. He could look at a map and find out whether or not he was going to be protected from encroachments by shops and factories; and if he contemplated changing his abode he could look at another section of the same map and tell whether he could safely build a residence in the new place.

Transportation played a big part in the studies of the Districting Commission. It made a "transit time zone map" showing the estimated time from 14th street to every part of the city on the new subways. But this was only one of many: one map showed the distribution of factory employees, both in their working places and in their homes; another showed the assessed land values per front foot; another showed the state of building development at various periods in the history of the city; another showed hills and valleys and other topographical features.

All during its investigation the commission followed the course of the Heights of Building Commission in consulting representatives of professions and trades. It was determined to get the benefit of the community's accumulated knowledge of the whole subject; and when it approached the end of its studies it invited individuals to present their views at public hearings. The remarkable success of the commission in winning to its support the forces of good citizenship, in impressing the public with its sincerity and competence, was proved by the practically unanimous approval that met its recommendations. Not a single organization, and but two or three individuals, objected to the principle of the proposed restrictions; and changes suggested were almost all in the direction of more severe restrictions.

The Obstacles of the Law. I have spoken of the concern of the Heights of Building Commission about the legal validity of regulation; and the second commission was, if anything, still more careful to guard against difficulties here. It knew that the free use of land had been a sort of tradition in America. Our forefathers did not bring with them across the sea the doctrine of "ancient lights" that has prevailed for centuries in Great Britain; and the phrase frequently heard among the ungodly: "The sky's the limit," has actually described the attitude of a great portion of the public toward building operations.

European precedent could not be expected to mean much in a strictly legal sense, but it could have an indirect effect in its bearing upon the reasonableness of regulation. Our own courts had put the stress upon this question of whether the restrictions were reasonable or not; and every bit of evidence that the proposed law measured up to the rule of reason was valuable whether the evidence came from the Old World or the New. Accordingly, the commission fortified itself with plenty of data from the cities of Europe.

I purposely omitted consideration of the legal aspects of regulation in my brief review of the work of the Heights of Building Commission because it is better to introduce it in connection with a very recent event; and that event is the fulfilment of the expectation of the Districting Commission: the filing of a suit at law involving the constitutionality of the new resolution. It is worth while to review this case not only for its own sake, but because it illustrates remarkably well the character of the work done by the commission.

One Estelle P. Anderson made a contract on July 13, 1916, to sell the premises at 112 West 58th street to Steinway & Sons, piano manufacturers. That was just before the so-called Building Zone Resolution went into effect. When the time came to deliver the deed, Steinway & Sons refused to accept it, on the ground that the owner could not deliver it in the sense of the contract, "free from all encumbrance." They said that the designation of this block in West 58th street as a residence block, which would prevent them from erecting the sort of building they had planned, constituted an encumbrance and relieved them of the obligation to accept and pay for the premises. The owner thereupon brought suit to compel them to carry out the contract; she contends, first, that the resolution is unconstitutional; and, second, that whether it is constitutional or not, it is not an encumbrance. Steinway & Sons, in upholding their contention that it is an encumbrance, are in the position of defending its constitutionality. But the city has also come in as an interested party and is prepared to fight to the last ditch.

Though the particular block in question between Sixth and Seventh avenues was declared reserved for residences, the one to the south in 57th street, the one to the east between Fifth and Sixth avenues, and the one to the west between Seventh avenue and Broadway were all declared business districts. It appears, then, that the stretch between Sixth and Seventh avenues was a sort of residential "pocket." The commission is prepared to prove that it ought to stay such. One of the experts who contributed to the original decision has stated flatly in connection with this suit that "the use districts laid out by the commission on and in the vicinity of 58th street, between Sixth and Seventh avenues, were absolutely justified by the present development and by the prospective future development."

The Record of Other Cities. The task of the city now is simply to prove the reasonableness of this view. A long array of court decisions upholds building restrictions as a valid exercise of the police power of the State, which one eminent judge has described as "a power incapable of exact definition, but the existence of which is essential to every well ordered government."

Boston supplied one of the most noted cases of building regulation in America when it divided itself into two districts, decreeing a height limit of 125 in one and 80 in the other (with certain exceptions depending upon street widths). This municipal act was attacked in the courts and the case went all the way through to the Supreme Court of the United States. It was triumphantly upheld.

But it was height and not use that was involved in Boston. The action of the Los Angeles city government presents what is perhaps the most striking instance of use district legislation in this country. For that city not only decreed a residential section, but made its decree retroactive, a degree of severity which no other American city has attempted. A person named Hadacheck, who had a brick kiln in the district, protested against being ousted; but the court to which he appealed refused to interfere with the act of the municipal corporation. And the Supreme Court of the United States sustained the ruling, saying: "There must be progress, and if in its march private interests are in the way, they must yield to the good of the community. The logical result of the petitioner's contention would seem to be that a city could not be formed or enlarged against the resistance of an occupant of the ground, and that if it grows at all it can only grow as the environment of the occupations that are usually banished to the purlieus."

This indefinite police power has been haled into court in hundreds of instances; it has been attacked as a tyrant by the persons to whom it caused loss and defended as a benefactor by communities. It has found the judges friends or enemies according as it has proved its intentions and methods good or bad. But the marked tendency has been to assume that the wielder of the police power is in the right; the burden of proof, it appears from the outcome of dozens of suits, is on the man who combats it. Furthermore, the laws laid down by communities in the interest of the general public and against the interest of particular persons or corporations are valid even though not necessary to such vital things as health and safety. Convenience, comfort, and general welfare are objects fully justifying restrictions on property owners. One noted authority has stated that "a police regulation to be legitimate does not have to be absolutely essential to the public welfare, but the exigency to be met must so concern such welfare as to suggest, reasonably, necessity for the legislative remedy. The police power extends to all the public needs and it may be put forth in aid of what is sanctioned by use, or held by prevailing morality or strong and preponderating opinion to be greatly and immediately necessary to the public welfare."

The Bogey of Beauty. There is a touch of the comic in the care which municipalities take to avoid the implication that any of their restrictions are primarily in the interest of beauty. The Districting Commission in New York has been no exception. Though architects are solidly lined up in favor of the regulations, and their support is welcomed, the proponents of the new resolution have zealously made their appeal to the practical common sense of the community and nôt to the æsthetic sense. Apparently the fear is general that the courts will frown upon a law that has for its excuse the improvement of the appearance of streets or buildings.

Yet there has been evidenced considerable judicial sympathy with legislative attacks on ugliness. When Baltimore had to defend in the courts its ordinance forbidding buildings more than 70 feet high near the Washington Monument, Judge Worthington's opinion contained the declaration that "perhaps the culture and refinement of the people has reached the point where the educational value of the fine arts, as expressed and embodied in architectural symmetry and harmony, is so well recognized as to give sanction, under some circumstances, to the exercise of the police power even for such purposes." And one of the judges passing upon the famous Boston case said that "if the primary and substantive purpose of the legislation is such as justifies the act, considerations of taste and beauty may enter in as auxiliary."

A truly novel view was expressed by the Supreme Court of the Philippines in upholding a statute providing for the removal of billboards that were "objectionable to the sight." Justice Trent, in delivering the opinion, stated flatly that the success of billboard advertising depended not so much upon the use of private property as upon the use of the channels of travel. Suppose, he asked, that an advertiser should paste his bills on the inside instead of the outside of his fence — of what use would they be? The regulation of billboards was not, therefore, the regulation of private property, but of the use of the streets.

All lovers and defenders of the beautiful ought to cherish an affection for this judge because of his following words, which were, in part: "We think it quite demonstrable that sight is as valuable to a human being as any of his other senses, and that the proper ministration to this sense conduces as much to his contentment as the care bestowed upon the senses of hearing or smell, and probably as much as both together. Why, then, should the government not interpose to protect from annoyance this most valuable of men's senses as readily as to protect him from offensive noises and smells?"

Of course, European cities have long regulated building in the interest of beauty. A structure must conform in its general architecture to other structures on the same street. Rigid height limits — far more rigid than we dare to attempt — are enforced for the same reason. The expert whom the Heights of Building Commission sent to Germany told in his report of laws that forbade "painting in harsh colors," and compelled every wall that could be seen from a street to be finished to some degree like a façade. It is a pity that public sentiment in this country did not approve of such restrictions fifty or seventy-five years ago; we are beginning to applaud them now, but meanwhile our cities have grown unevenly and ungracefully.

Regulation and the Pocketbook. In New York the Districting Commission and its friends have no difficulty in making out a powerful case when they carry their appeal straight to the pocketbook. For years, as real estate values went down, owners fussed and fidgeted and complained of the conduct of one city administration after another, and could not understand what was happening to them. All the while one of the main causes of their trouble was this same chaotic building which only a few far-sighted men saw in its true light. Only when the evidence had piled up, and what had been plain to the few could no longer escape the view of the many, did the business men of the town rush to the support of the proposed restrictions.

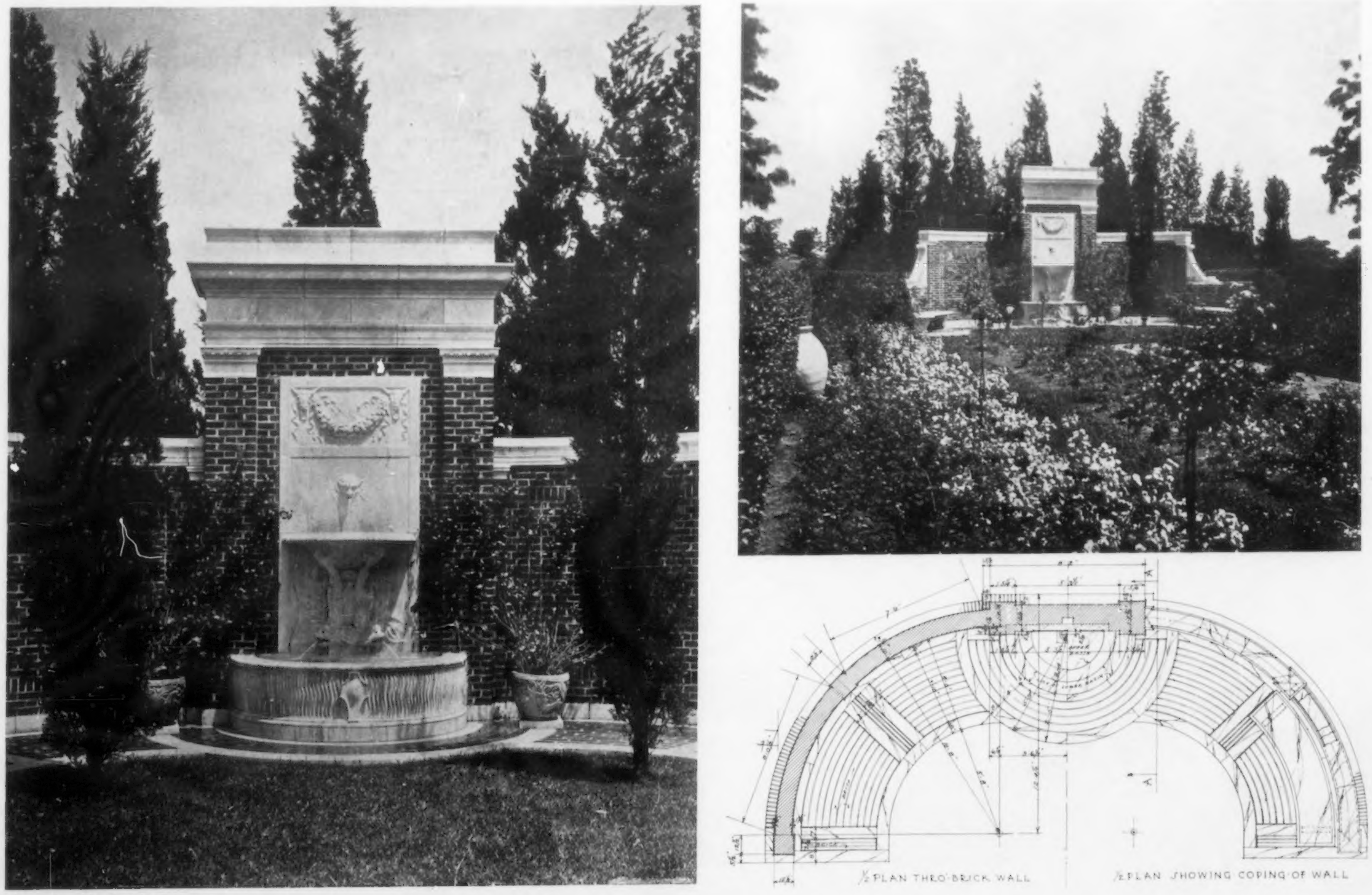
The need that had long appealed to city planners — of providing light and air for the people in working place and home, of guarding against fire, of relieving congestion — became convincing enough when it was shown to coincide with, and not to conflict with, the need of protecting and stabilizing realty values.

"In New York City," said the Districting Commission, "the purely private injury incident to haphazard development has become so serious and widespread as to constitute a great public calamity. Through haphazard construction and invasion by inappropriate uses the capital values of large areas have been greatly impaired. This destruction of capital value, not only in the central commercial and industrial section of Manhattan, but also throughout the residential sections of the five boroughs, has reached huge proportions. It does not stop with the owners in the areas immediately affected, but is reflected in depressed values throughout the city. Market value for investment purposes is always affected by the hazard of the business. Economic depreciation due to unregulated construction and invasion by inappropriate uses has become a hazard that must be considered by every investor in real estate. This extra hazard increases the net earning basis required to induce investment, and consequently lessens capital values throughout the city. Whatever the capitalized amount that may be properly charged to the economic depreciation hazard, it is certainly a huge burden and one that affects not only the individual owners of real estate throughout the city, but the savings and other large lending institutions, the municipal finances, and the general welfare and prosperity of the whole city."

In the greatest city in the New World nothing was done to direct growth, in the interest of beauty, health, and safety, until Mammon cried out in distress. And had it not been for a small group of men blessed with vision, not for years to come would Mammon have known what was hurting him. But it is not particularly profitable to dwell upon the awakenings that had to take place before New York entered upon its new era of building development. The point is that the thing that ought to have been done has been done. City-planning — a term that not long ago was greeted with derision in city councils — has been turned from a dream into a reality. And one of the greatest of all municipal achievements is written down to the credit of New York.

THE GARDEN OF J. H. POOLE, ESQ., AT DETROIT, MICH.

CHITTENDEN & KOTTING, ARCHITECTS



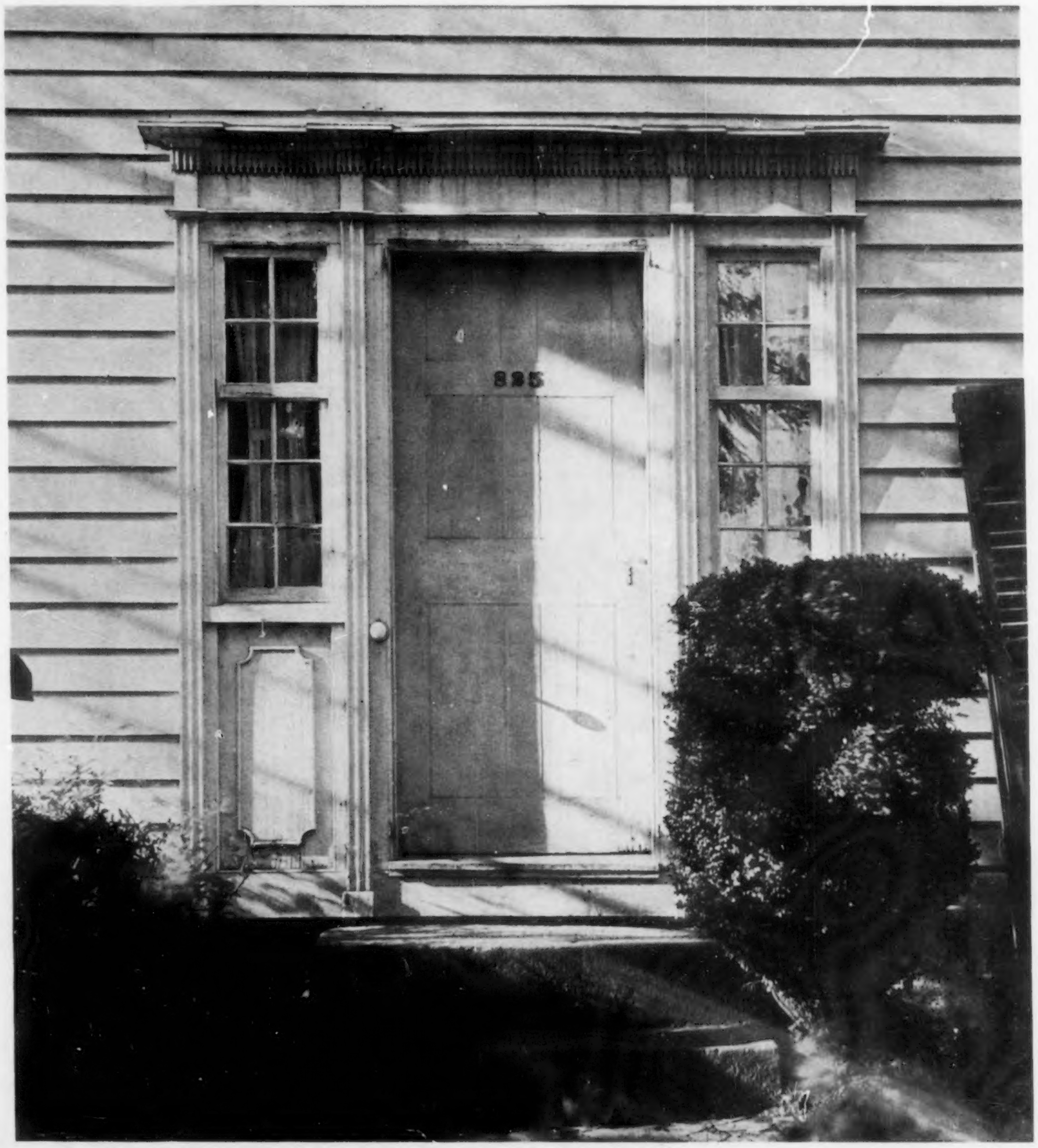
Photos. Copyright, 1916, Harry Coutant

WALL FOUNTAIN ON ESTATE OF DR. ERNEST FAHNESTOCK, SHREWSBURY, N. J.

LEWIS COLT ALBRO, ARCHITECT

THE FORUM COLLECTION
EARLY AMERICAN ARCHITECTURAL DETAILS

PLATE THIRTY-SIX



THIS doorway is decidedly original in conception, with no suggestion of any classic model. The mouldings are few and simple, yet the result is full of charm and elegance. The beak moulding, which breaks around the pilasters to form their caps, is most unusual in section. The contour of the top member of the simple cornice is very pleasing, the curve over the doorway proper serving to accent the central part of the motif. An unusual feature in a doorway of this type is the use of double hung sash in the sidelights. The house itself is very simple, having been originally a farmhouse.

DOORWAY OF THE HUMISTON HOUSE, HAMDEN, CONN.

Built about 1815

MEASURED DRAWING ON FOLLOWING PAGE

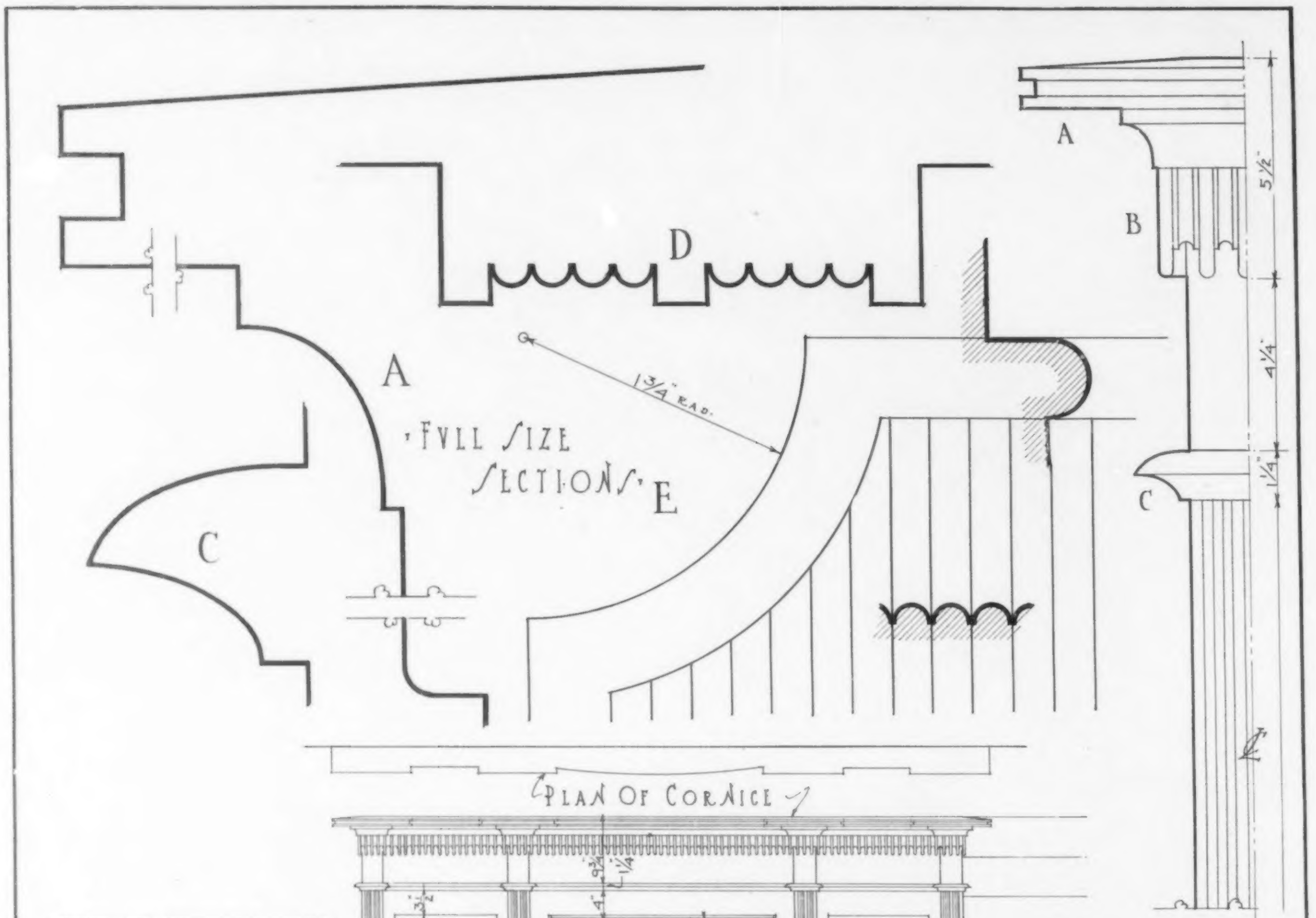


PLATE 36 JANUARY 1917	HVMISTON HOVSE FRONT ENTRANCE HAMDEN~CONN· BVILT 1815	MEASVRED AND DRAWN BY J·FREDERICK KELLY

White Lion Hotel, Cobham, Surrey

Small English Buildings of the Late Georgian Period

By R. RANDAL PHILLIPS

IN the realm of English domestic architecture there are two periods which stand out preëminently, vying with one another in point of charm of effect and suitability of purpose. These two periods are the Tudor and the Georgian. Up and down the country innumerable examples still testify, in the one case, to the traditional skill of builders who were not consciously working toward an artistic result; and, in the other case, to the disciplined talent of architects who added a human touch to classical forms. The term " Georgian " serves well enough to designate the latter type of house, though, strictly speaking, the style antedates the first of those four Georges of Hanoverian descent who occupied the throne of England for nearly a hundred years. For the beginnings of the style we have to go back to the time when Wren and his school were producing a distinctively English phase of classical architecture, deriving a good deal of inspiration from Holland; but when, in the following century, we come within the exact period of the Georges, there is a very marked difference to be seen between the early and the later work — a difference consisting, for the most part, of refinement in proportion and detail. The last and most elegant phase, as expressed in the small brick houses of the period, is the subject of the present article. From 1750 onward to the end of the century English houses acquired a character which, if it was matter of fact as the age itself was matter of fact, was consistently logical and well balanced. There was nothing of fervor or spiritual zeal in eighteenth-century England, and the houses of the period reflect this fact just as much as the literature does. But especially during the Late Georgian period influences were at work which added great refinement and delicate charm to the domestic architecture. In approaching this period it is inevitable that the name of Robert Adam should be mentioned as one who exercised a dominant power on English architecture, stamping it with the mark of scholarly refinement; but, though Adam claims the lion's share of attention, it is well to note that there were other architects who did work of equal and sometimes of greater merit. We know the names of some of these men, such as Thomas Leverton, J. M. Gandy, Thomas Sandby, and William Yenn; but in the case of most of the houses that have come down to us we are unable to discover who the designer was. As a class, these Late Georgian houses stand unrivaled, and in view of the interest which has latterly been given to the architecture of the late eighteenth century and early nineteenth, it is opportune to present the accompanying series of illustrations showing representative examples. We are not now concerned with those large country houses and town mansions which rich clients were able to erect, but with the innumerable small houses which sprung up, especially around the growing towns, to meet the needs of prospering citizens. Most of these houses were built of brick, the brickwork being sometimes left exposed, and sometimes covered with a smooth stucco, which was generally whitened. They bear a strong family likeness one to another, but they are by no means cast in the same mould, offering all sorts of different treatments, both in general design and in detail. But there is this prevailing characteristic about them all,— a studied sense of good proportion and a refinement in design in such features as the doorways, cornices, string-courses, etc. With very few exceptions they are of two stories only, the front being treated as a symmetrical design, with the doorway in the center. The plan was a very simple one, consisting of a central passage with rooms on either side; and though this plan has its defects when applied to-day on restricted frontages, where it is desired to have the largest possible rooms with a minimum of waste space in passageways, there are many points of advantage when no such limitations are imposed; for example, straightforward access is given to all the rooms, the service can be conveniently arranged, and the house can be admirably

Garden Front of Brown House, Reigate, Surrey

ventilated by simply opening the front door and allowing a current of air to sweep through the passage to the back of the house.

The doorways to these Late Georgian houses display a great variety of treatment, from simple hoods and reeded architraves to pedimented porches supported by pillars; but perhaps none are so attractive as those with trellis porches, these being fashioned of wood, and especially charming in appearance when intertwined with rose or clematis.

The windows are divided by bars of small section and are filled with panes of that glittering crown glass which is so greatly superior in effect to the glass which is manufactured to-day. While referring to this glass we may be permitted the digression of explaining the manner of its manufacture. A blob of molten glass was taken on the end of a long tube and blown out in the form of a globe, which was then pressed upon until it assumed a pumpkin shape. An iron rod was then attached to the globe on the opposite side to the tube, and by a quick turn with a wet stick the glass was cracked around the latter and the tube was withdrawn. The globe, attached to the iron rod, was next spun between the hands in front of the muffle furnace and the centrifugal force burst it open — unrolling it like a flag — so that there was then a disc of glass spinning round on the end of the rod. The disc was gradually withdrawn from the furnace and at the same time the rotation was gradually reduced. When the glass had set, the disc was placed gently down on a bed of sand. The maximum possible size of a disc formed in this way was about four or five feet. Panes were cut out on either side of the center, and this limitation of possible size was a determining factor in the design of the window. The glass was never absolutely flat, but always slightly concave, and the concave side was invariably set outward in the window. The result is that these old windows catch the light and reflect it in a most charming manner, and a house front thus has an interest which is not given by any other sort of glass. The center of the disc, where the iron rod was attached, was only of use for the least important purposes, and on account of its cheapness was largely adopted for the windows of cottages, forming those "bull's eyes" which are sometimes, in an affected manner, repeated to-day.

The roofs of the Late Georgian houses were tiled or slated — more often the latter — and they very rarely had rooms in them. It would be a vast improvement if modern houses followed that model, because when rooms are crowded into steep roofs, in the manner so largely favored by "Garden City" architects, they become intolerably hot in summer and uncomfortably cold in winter; moreover, they are not properly square rooms, but have sloping ceilings that interfere with the head room and render it practically impossible to place furniture in satisfactory positions. The Late Georgian houses were ceiled straight across, and this not only gives rooms of a good shape on the upper floors, but also provides a cushion of air above which counteracts the effects of extreme heat and cold.

In dimensions the rooms were, as a rule, smaller than we like them to-day, but they had very agreeable appoint-

Doorway, Brown House, Reigate, Surrey

PAIR OF ROADSIDE HOUSES, COBHAM, SURREY

GARRICK VILLA, HAMPTON-ON-THAMES

EXAMPLES OF THE LATE GEORGIAN PERIOD IN ENGLAND ments, especially simple mantelpieces of marble or wood, well designed and frequently embellished with good ornament, and in some cases the rooms were paneled, though this was not by any means the rule, as the houses were not built for wealthy tenants, and cost was a controlling factor then just as it is now. Unfortunately the interiors are not preserved for us as the exteriors are, for successive alterations have oftentimes robbed them of a good deal of their interest, and in most cases they are filled with furniture which lacks the refined character that distinguished the furniture of the late eighteenth century in England.

These houses, while they belong particularly to the second half of the eighteenth century, cannot be limited to that period, for they were repeated, with slight modifications only, almost for the whole of the first quarter of the nineteenth century, though the freezing manner of the Greek Revival was surely proclaiming their end. But we can at least be thankful that so many still remain, and it is with the object of showing a few representative types that the accompanying illustrations have been gathered together. The following are some detailed notes on the illustrations:

"THE WICK," RICHMOND HILL. This is situated on the top of Richmond Hill and commands a magnificent view of the Thames Valley from its back windows. The front elevation is essentially formal in character, but the light and graceful treatment of the details saves it from any appearance of baldness or heaviness. The removal of the glazing bars from the ground-floor windows is regrettable, and to some extent detracts from the effect as a whole. The design has been attributed to James Paine, but this cannot be determined with certitude.

Porch of House at Kingston-on-Thames

Doctor's House, New Cross, London, S. E.

STRAWBERRY HOUSE, THE MALL, CHISWICK. Apart from being a delightful example of its period, this house suggests *motifs* for modern application: note the treatment of the balcony and the porch, the apt use of ironwork, and the neat design of the window-blind boxes.

WHITE LION HOTEL, COBHAM. The long, low lines of the brickwork, with the broad tiled roof and the nestling dormers, together with the large grouped chimney stacks, give an air of generous hospitality to this house, and the treatment of the pedimented central portion, with the slender columns to the porch, adds the necessary touch of distinction to the front. The clever way in which the blank window spaces are introduced on the first floor at either side of the central bay, buttressing it up, as it were, is worth noting.

PAIR OF HOUSES AT COBHAM. The character of the design is one of quiet simplicity. The good effect of the whole is largely due to the proportion of windows to wall space. The windows of each house cluster around the entrance door, serving to emphasize the individual houses while at the same time forming one continuous composition.

BROWN HOUSE, REIGATE. The date of this charming house may be taken as 1784, this date being carved on a stone block in the cellar, and there is evidence to suggest that William Thomas was the architect. The piers at either side of the garden front are derived from early Georgian work, but the delicacy of the cornice is distinctly later

THE WICK, RICHMOND HILL, SURREY

STRAWBERRY HOUSE, THE MALL, CHISWICK, LONDON, W.

EXAMPLES OF THE LATE GEORGIAN PERIOD IN ENGLAND

Georgian, as, too, are the windows with their thin bars. The porch in itself is a delightful feature. The glowing red of the brickwork, the green of the creeper and of the lawn, and the gray of the slates on the roof make up a beautiful color scheme.

Garrick Villa, Hampton-on-Thames. Since Garrick's time this villa by Robert Adam has suffered much alteration within, but it preserves its exterior form largely intact. Adam's work consisted in giving a new face to an old house, and so well did he carry out the task that there is no suggestion of makeshift about it. The house faces the river at Hampton, its lawn — with a little classical garden-house on it — being separated by a roadway.


Woodbine Cottage, Petersham, Surrey

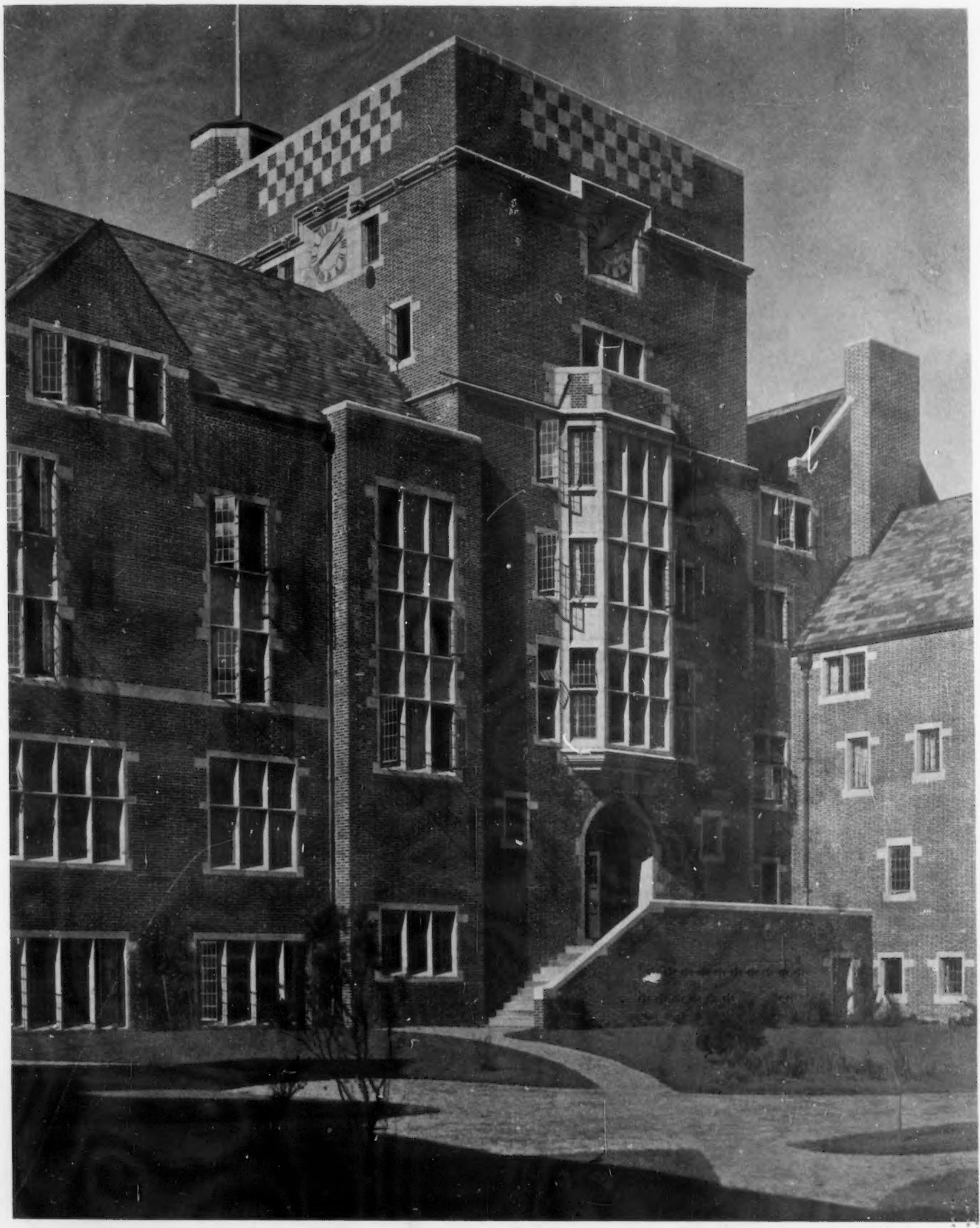
Doctor's House, New Cross. To this little street façade a piquant character is given by the concentration of attention on the first-floor bay window, with figures symbolic of health and strength in niches on either side.

The Paragon, Blackheath. The frontage of the Paragon at Blackheath follows the line of the outer walls of the grounds on which formerly stood the mansion built for Sir Godfrey Page. The house was pulled down in the latter years of the eighteenth century, when the present buildings were erected. An architect named Searle appears to have been responsible for the design. The treatment of the different blocks linked up with Doric colonnades is most original, preserving as it does the continuity of the design, whilst indicating the individuality of the separate houses. The detail throughout, though delicate in execution, is extremely masculine and direct in character. Originally the Paragon was built to provide accommodation for naval officers stationed at Greenwich or for others who had retired from the service.

Woodbine Cottage, Petersham. This was built probably between 1780 and 1790. The door, however, is designed in an earlier manner, and may be an old door reused from an earlier building.

Porch, Kingston-on-Thames. This is an excellent example of the Late Georgian trellis porch. The delicately reeded uprights and the Greek fret in the frieze are pleasant details in a very happy piece of composition.

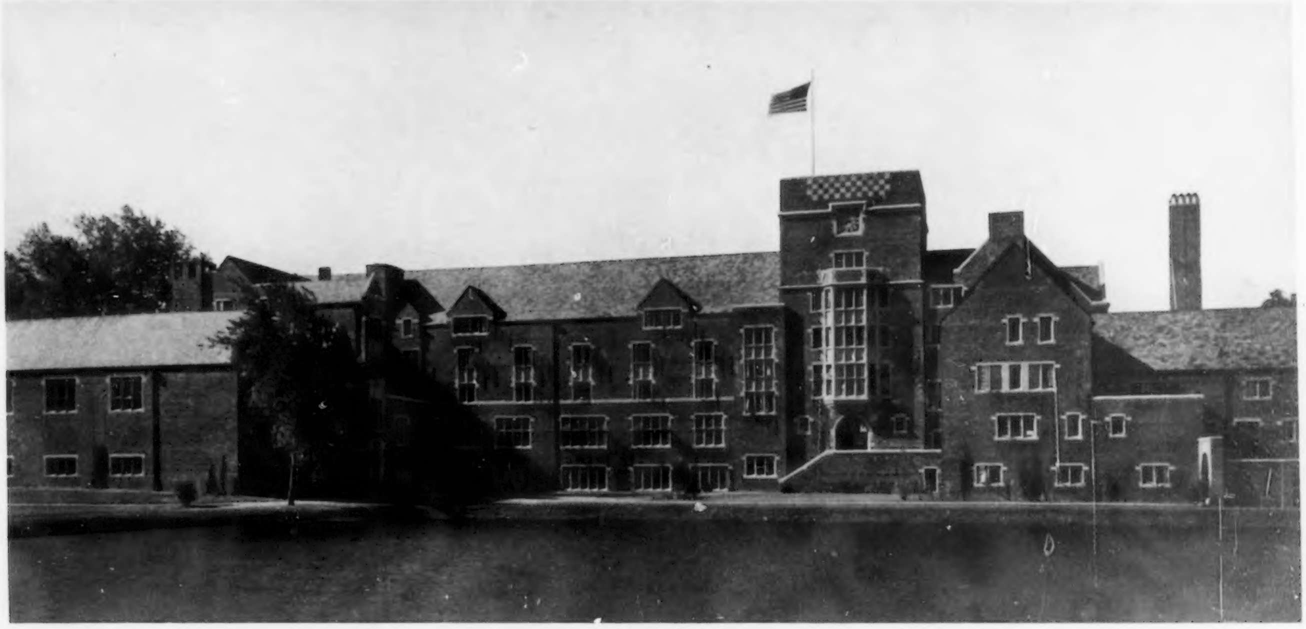

The Paragon, Blackheath, London, S. E.



DETAIL OF TOWER AND NORTH SIDE

TAFT SCHOOL, WATERTOWN, CONN.

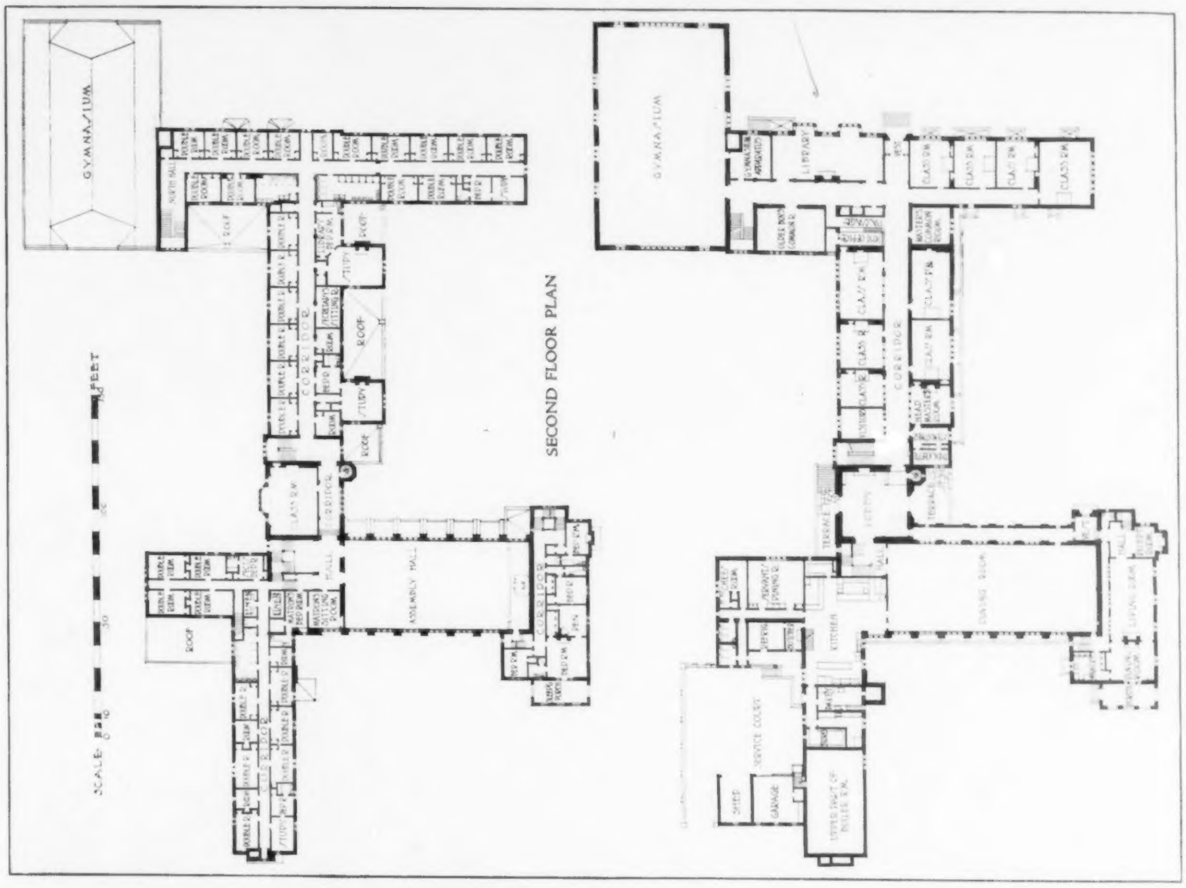
BERTRAM GROSVENOR GOODHUE, ARCHITECT



GENERAL VIEW FROM THE NORTH

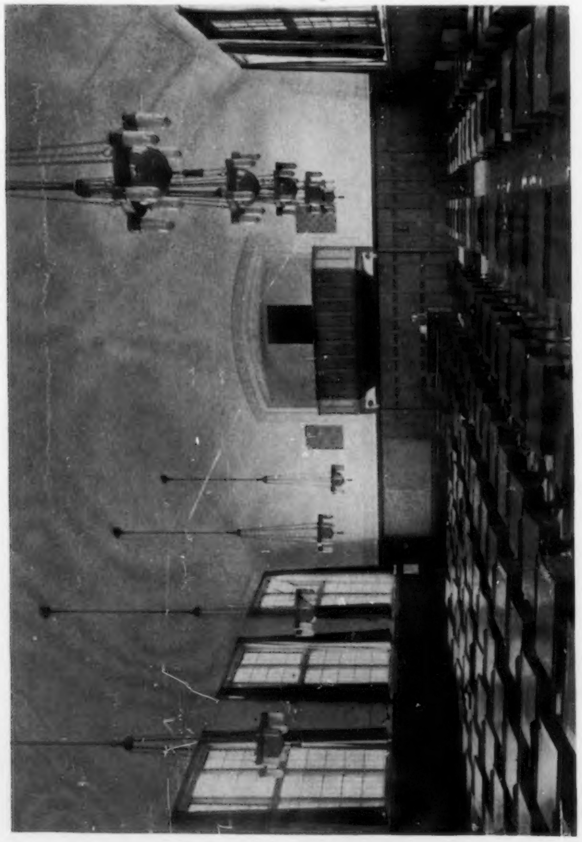
VIEW OF ENTRANCE OR SOUTH SIDE

TAFT SCHOOL, WATERTOWN, CONN.
BERTRAM GROSVENOR GOODHUE, ARCHITECT



SECOND FLOOR PLAN

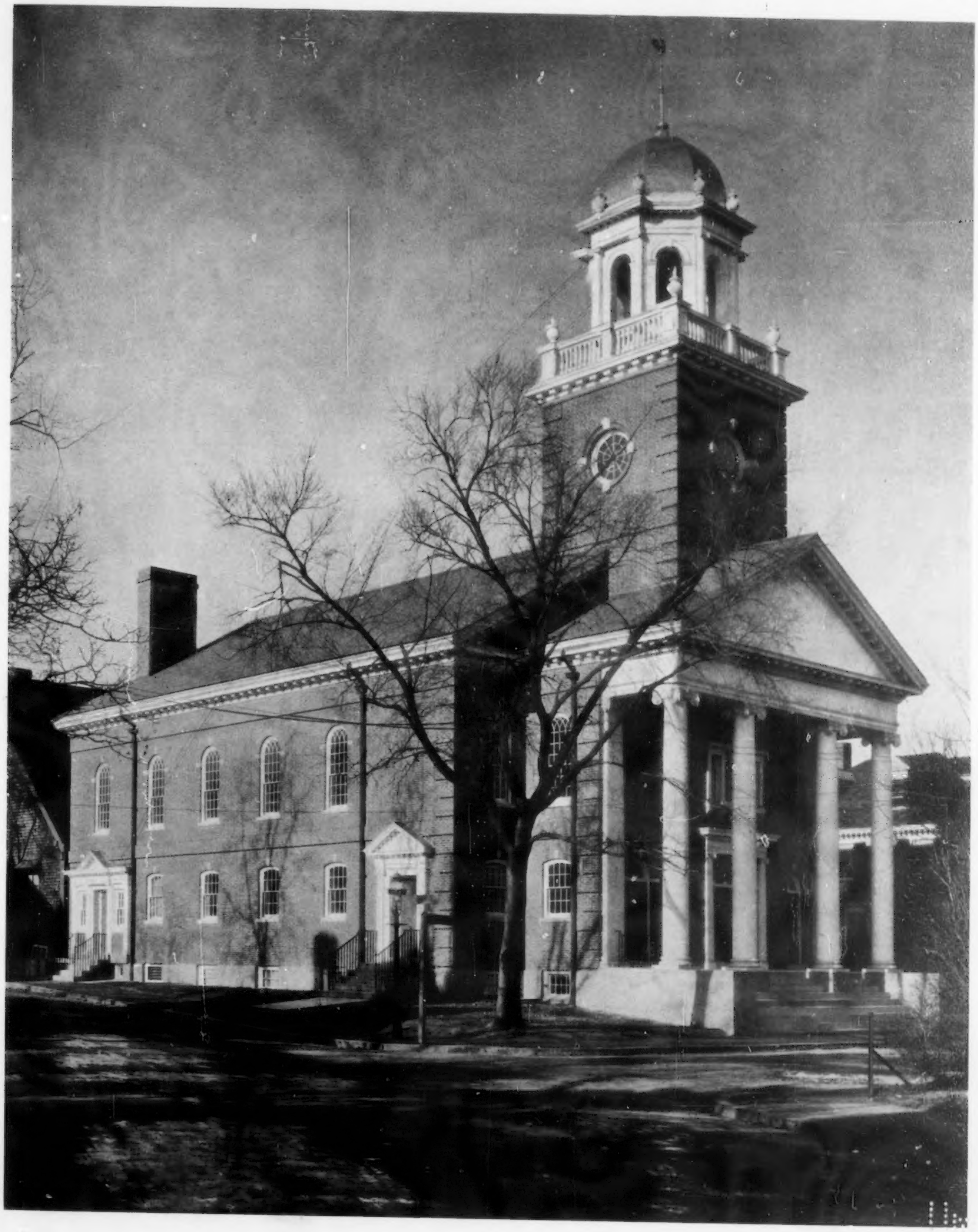
FIRST FLOOR PLAN



STUDY HALL

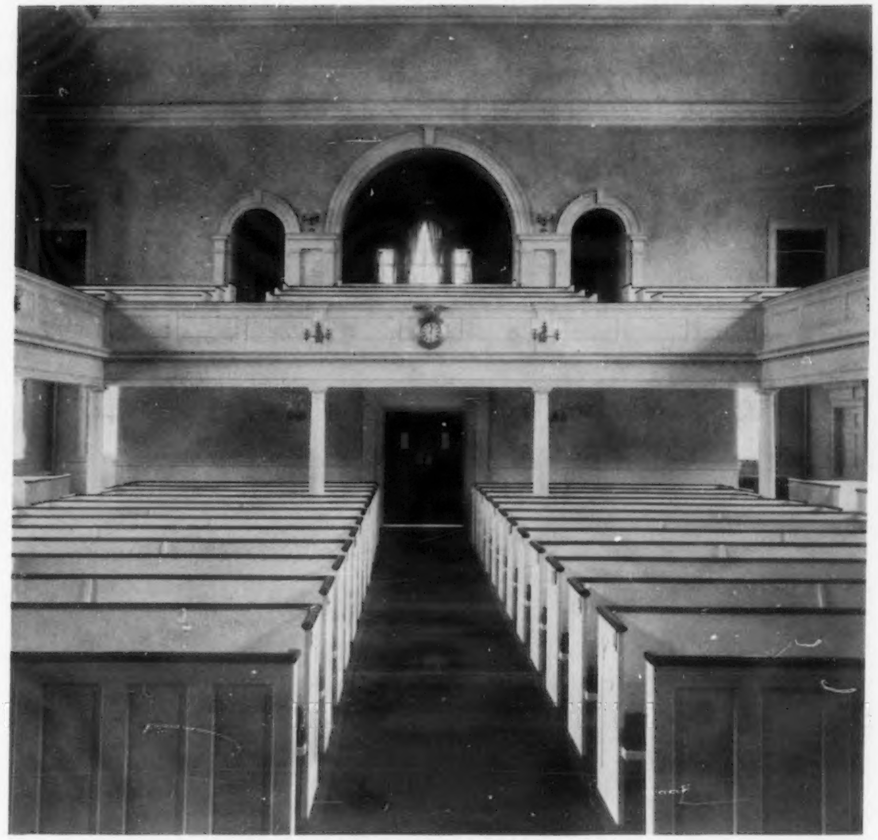
MASTER'S LIVING ROOM

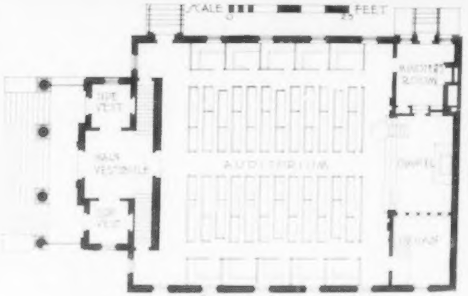
TAFT SCHOOL, WATERTOWN, CONN.
BERTRAM GROSVENOR GOODHUE, ARCHITECT



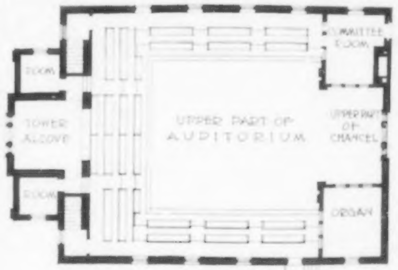
SECOND UNITARIAN CHURCH, BROOKLINE, MASS.
EDWIN J. LEWIS, ARCHITECT


VIEW OF CHANCEL AND PULPIT


VIEW LOOKING TOWARD REAR GALLERY



FIRST FLOOR PLAN



GALLERY FLOOR PLAN

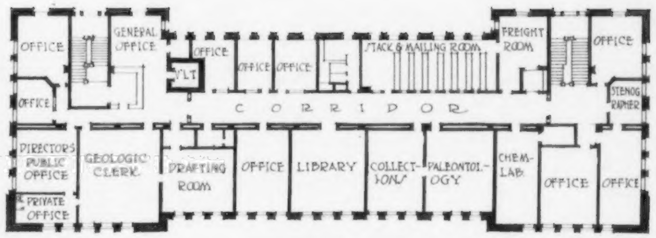
SECOND UNITARIAN CHURCH, BROOKLINE, MASS.

EDWIN J. LEWIS, ARCHITECT

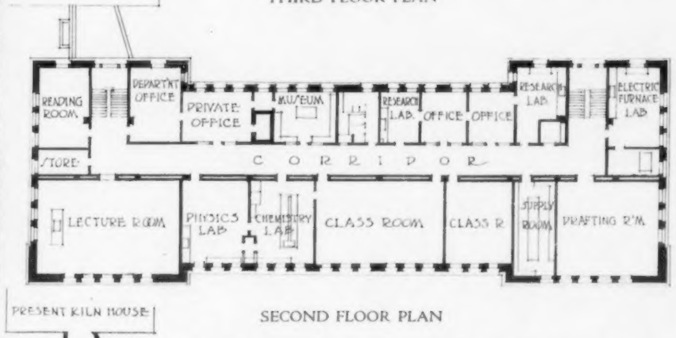
CERAMIC ENGINEERING BUILDING, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILL.

JAMES B. DIBELKA, STATE ARCHITECT, PROF. JAMES WHITE, SUPERVISING ARCHITECT

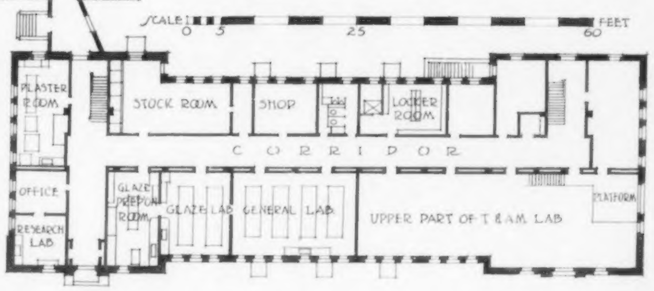
DETAIL OF END BAY AND ENTRANCE



THIRD FLOOR PLAN



SECOND FLOOR PLAN



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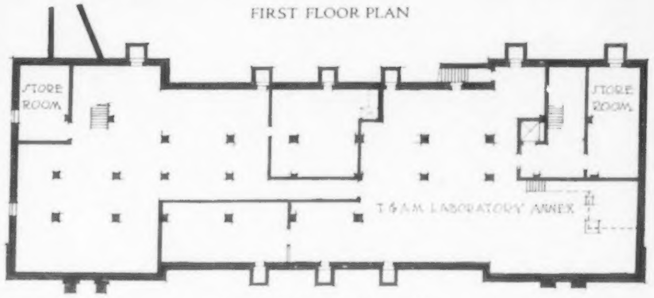
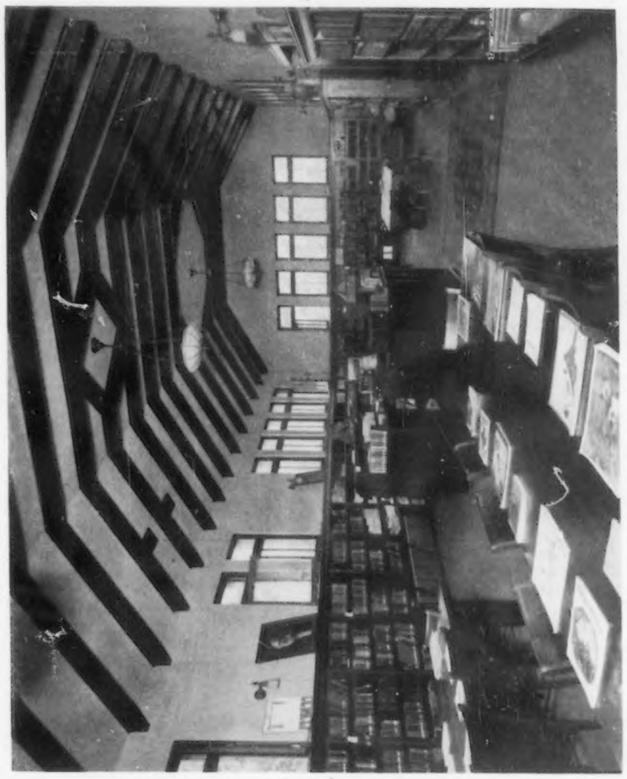


BASEMENT FLOOR PLAN

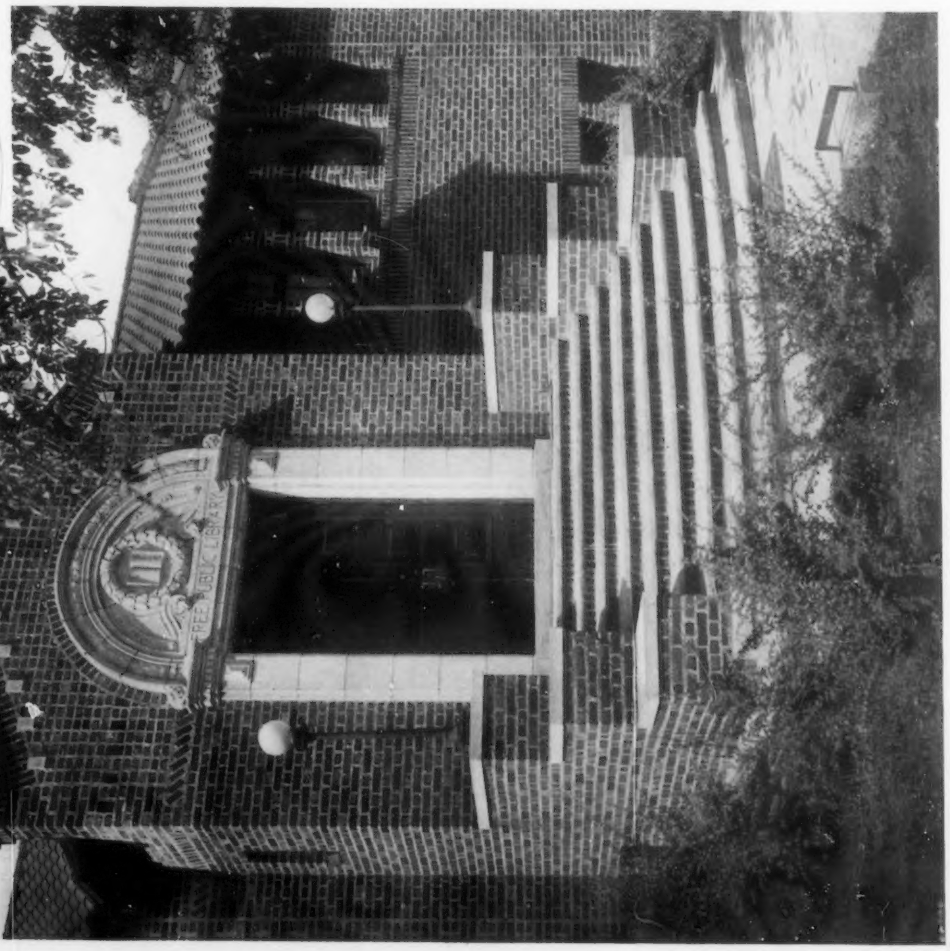
CERAMIC ENGINEERING BUILDING, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILL.

JAMES B. DIBELKA, STATE ARCHITECT, PROF. JAMES WHITE, SUPERVISING ARCHITECT

GENERAL VIEW OF EXTERIOR



GENERAL VIEW OF INTERIOR

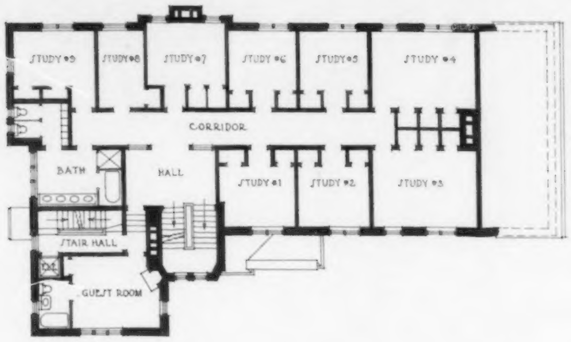


DETAIL OF ENTRANCE

PUBLIC LIBRARY, GLEN ELLYN, ILL.
GEORGE AWSUMB, ARCHITECT

HETH CHAPTER HOUSE, ACACIA FRATERNITY, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILL.

FREDERICK M. MANN, ARCHITECT



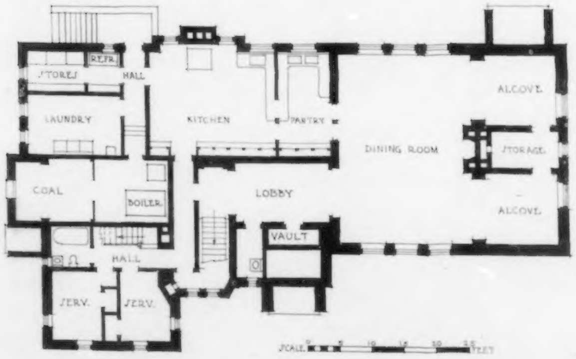
SECOND FLOOR PLAN

THIRD FLOOR PLAN

DETAIL OF ENTRANCE

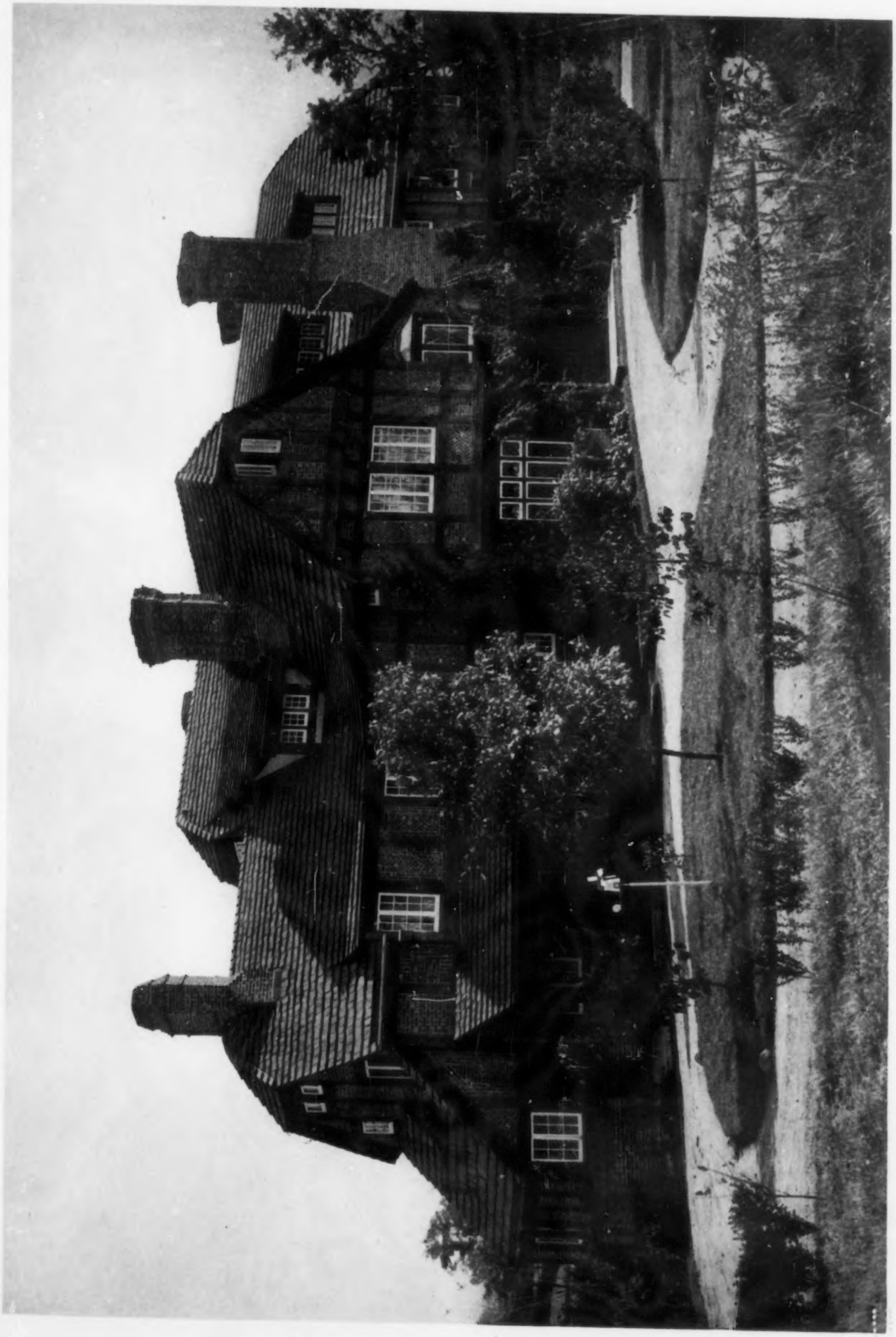
HETH CHAPTER HOUSE, ACACIA FRATERNITY, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILL.

FREDERICK M. MANN, ARCHITECT



BASEMENT FLOOR PLAN

FIRST FLOOR PLAN



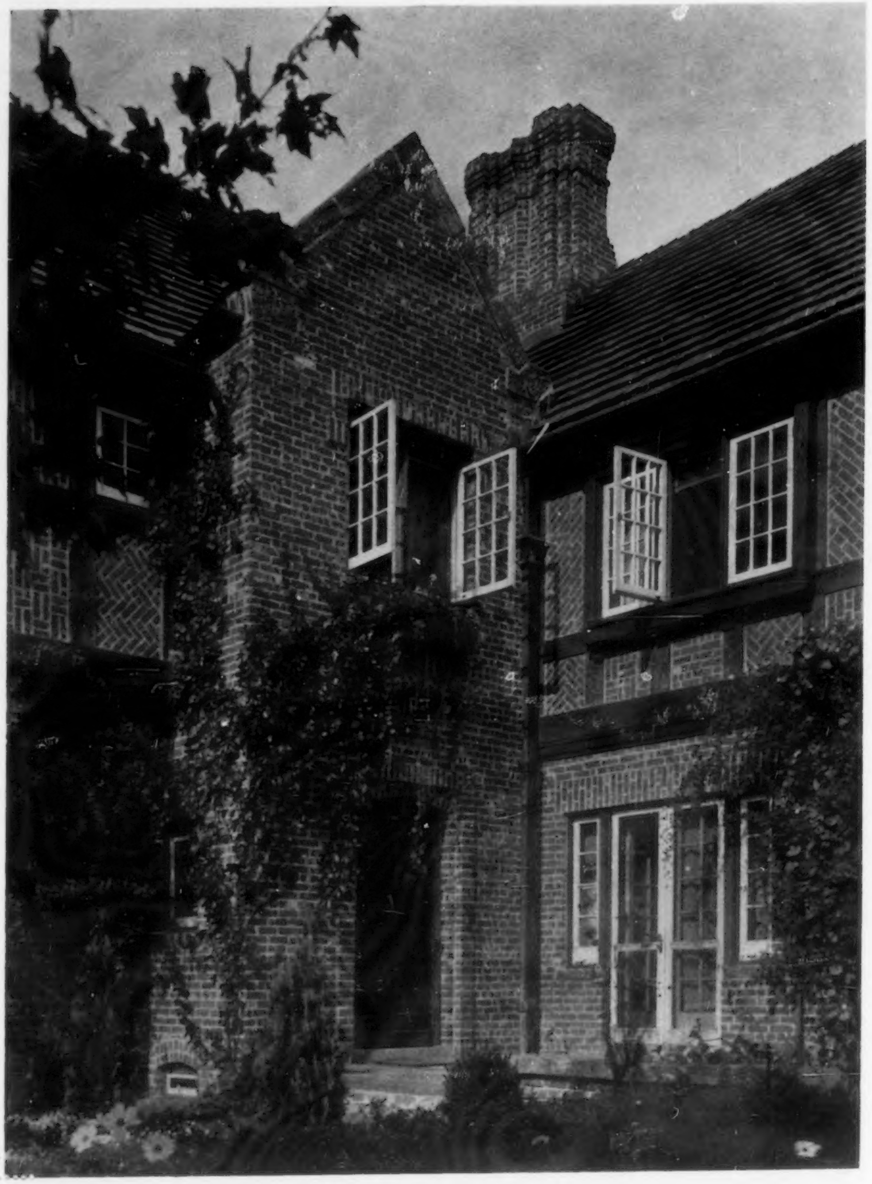
HOUSE OF PHILIP R. MALLORY, ESQ., RYE, N. Y.
HOBART B. UPJOHN, ARCHITECT

VIEW FROM DRIVEWAY APPROACH

GENERAL VIEW OF REAR

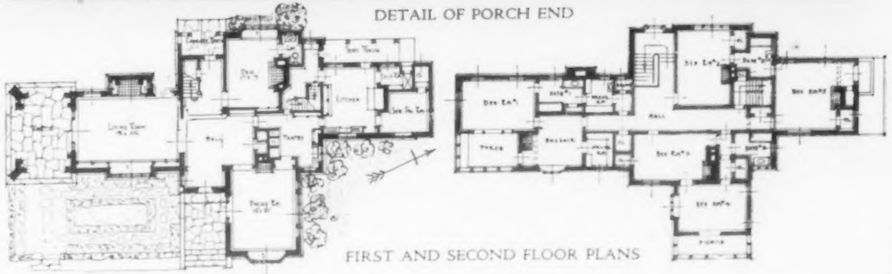
HOUSE OF PHILIP R. MALLORY, ESQ., RYE, N. Y.

HOBART B. UPJOHN, ARCHITECT



DETAIL OF GARDEN ENTRANCE

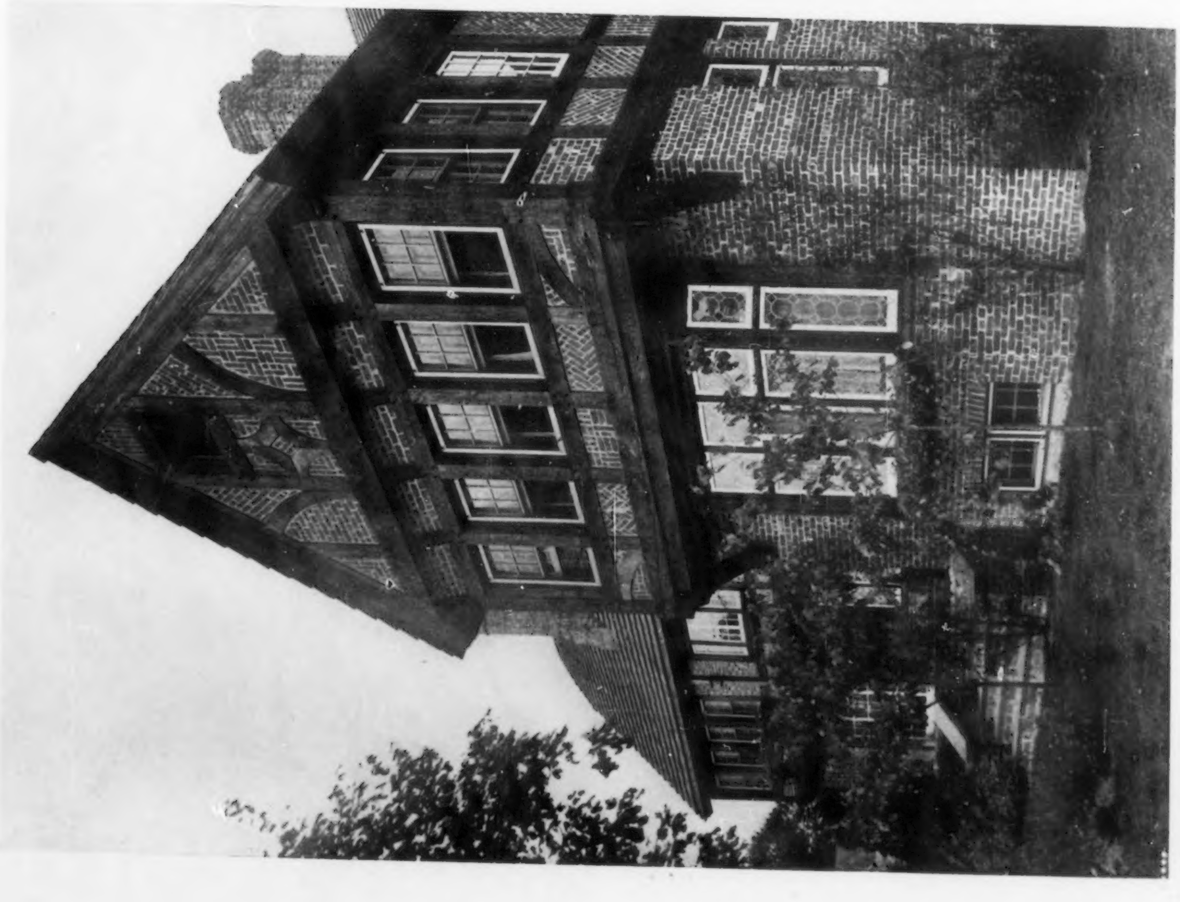
DETAIL OF PORCH END



FIRST AND SECOND FLOOR PLANS

HOUSE OF PHILIP R. MALLORY, ESQ., RYE, N. Y.

HOBART B. UPJOHN, ARCHITECT



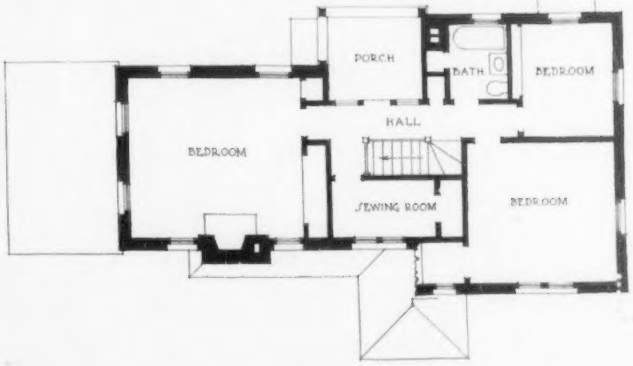
DETAIL OF DINING ROOM WING

DETAIL OF MAIN ENTRANCE

HOUSE OF PHILIP R. MALLORY, ESQ., RYE, N. Y.
HOBART B. UPJOHN, ARCHITECT

GENERAL VIEW OF EXTERIOR

FIRST FLOOR PLAN



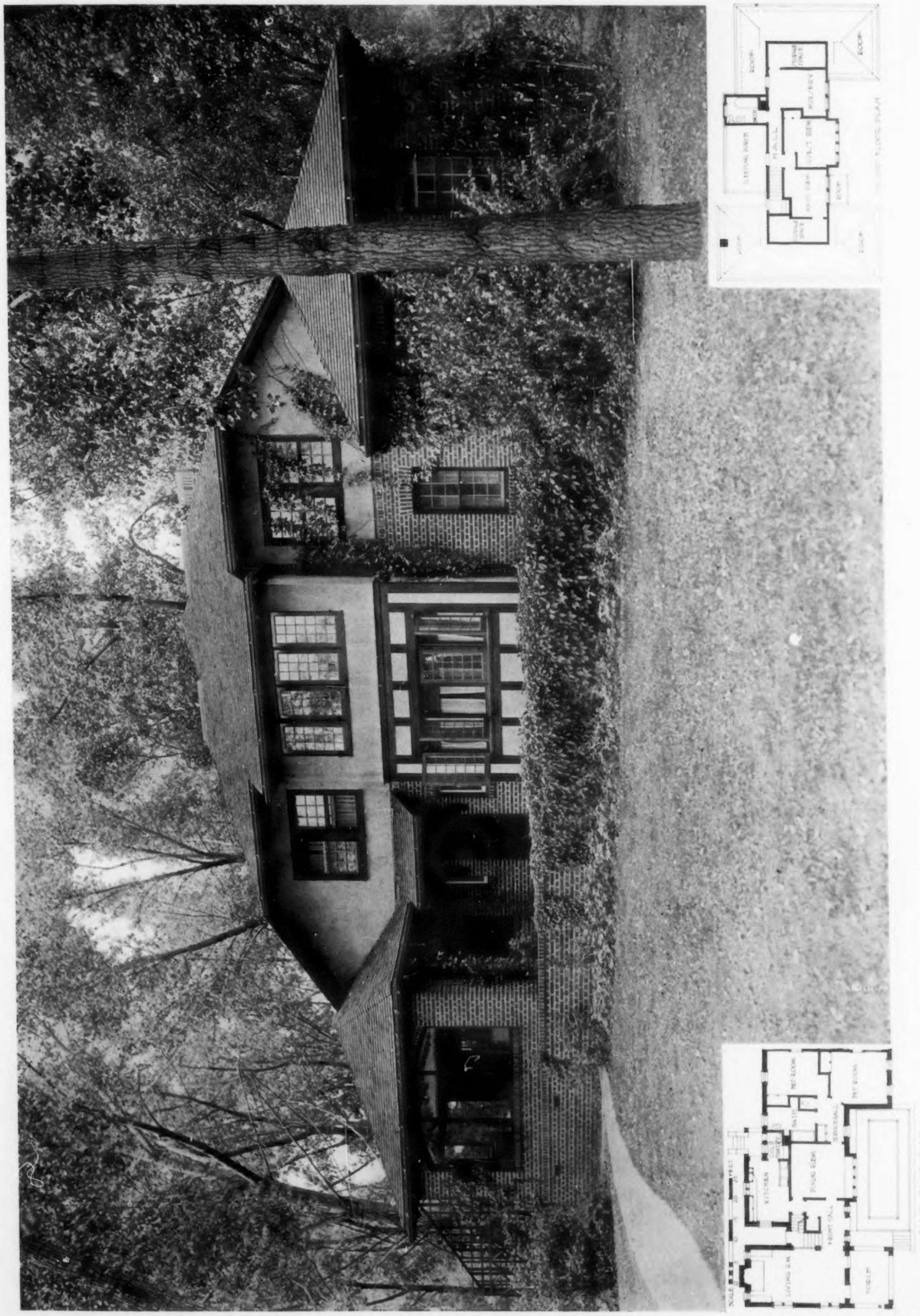
SECOND FLOOR PLAN

HOUSE OF ALEXANDER H. GUNN, ESQ., WELLESLEY, MASS.

FRANK CHOUTEAU BROWN, ARCHITECT

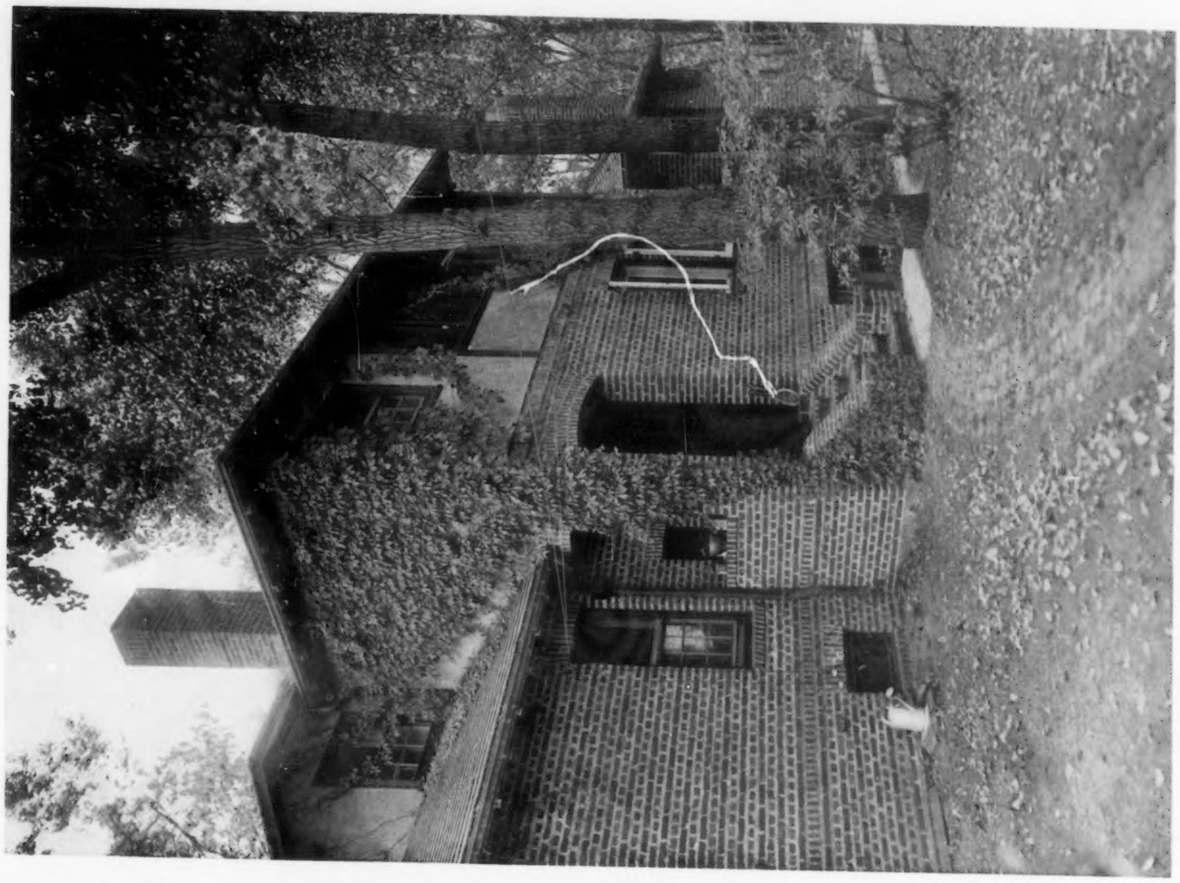
DETAIL OF ENTRANCE FRONT

HOUSE OF ALEXANDER H. GUNN, ESQ., WELLESLEY, MASS.
FRANK CHOUTEAU BROWN, ARCHITECT



HOUSE OF J. L. SULLWOLD, ESQ., ST. PAUL, MINN.
H. A. SULLWOLD ARCHITECT

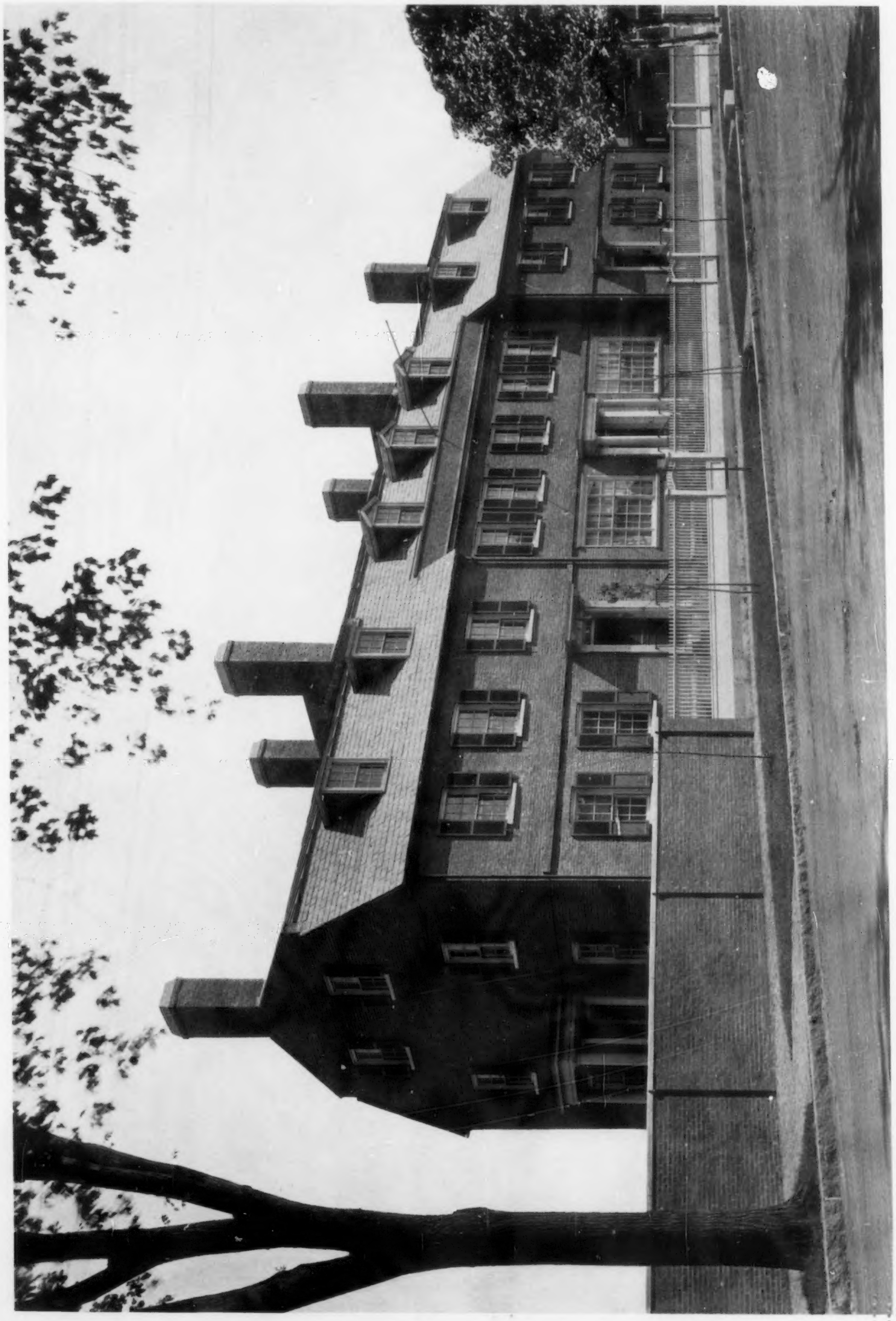
VIEW ALONG TERRACE



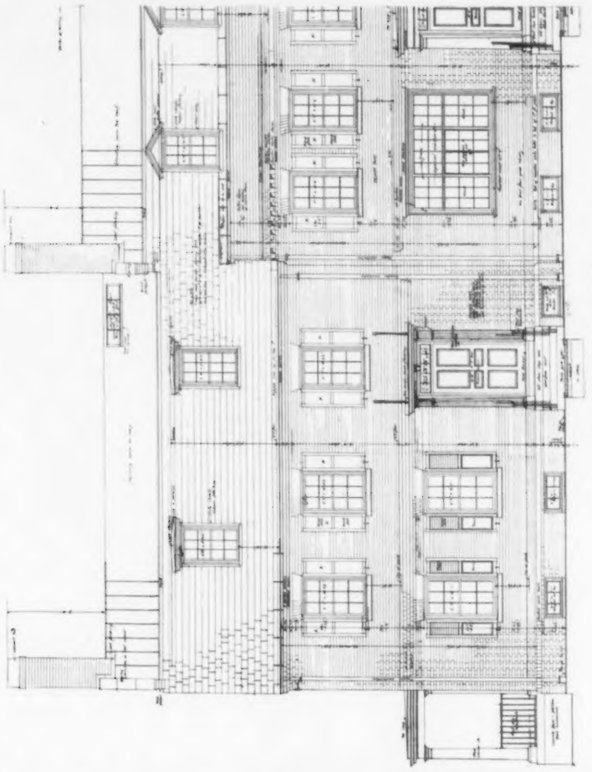
DETAIL OF REAR

HOUSE OF J. L. SULLWOLD, ESQ., ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

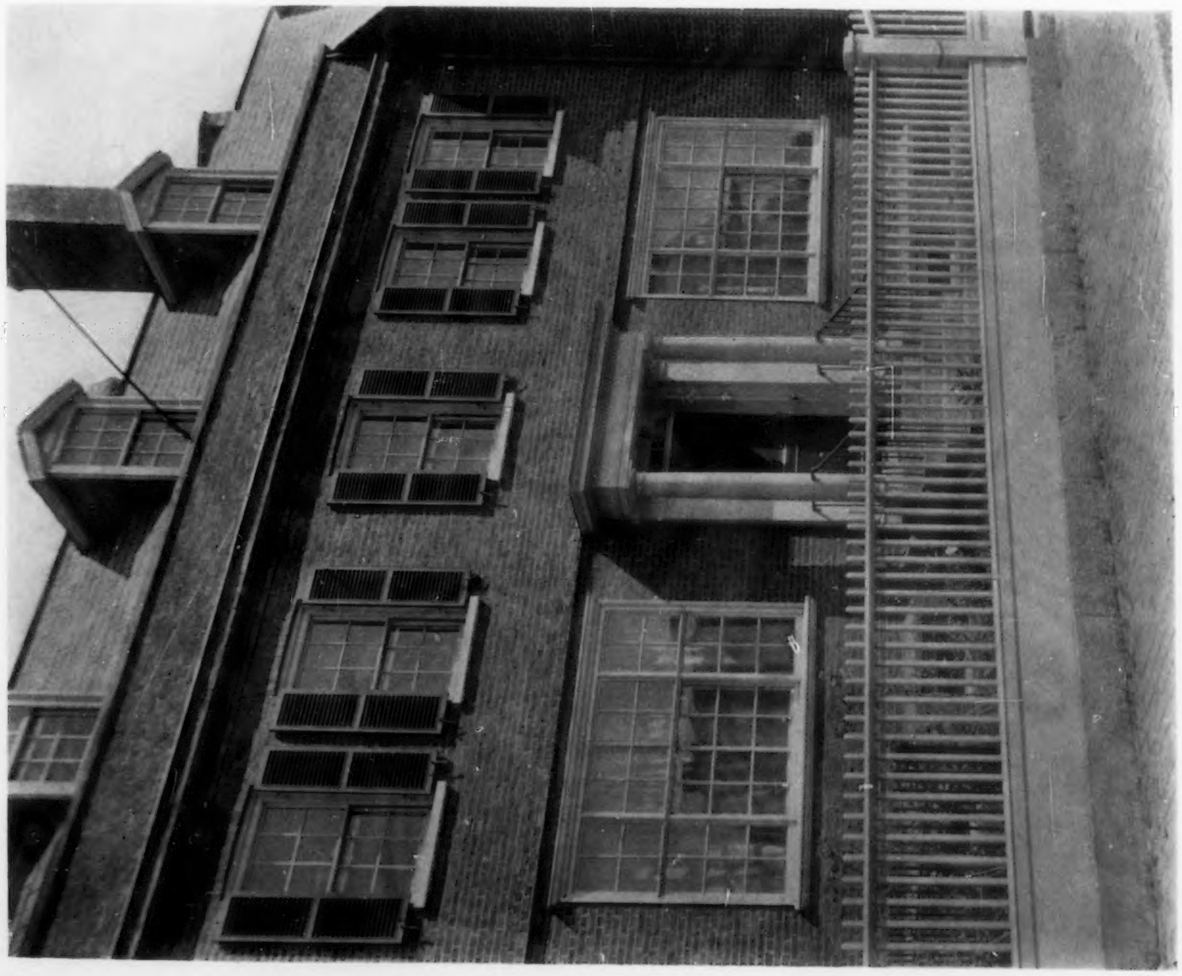


GROUP OF HOUSES, SALEM, MASS.
WILLIAM G. RANTOUL, ARCHITECT



DETAIL OF MAIN ELEVATION

FIRST AND SECOND FLOOR PLANS



VIEW OF CENTER HOUSE

GROUP OF HOUSES, SALEM, MASS.

WILLIAM G. RANTOUL, ARCHITECT

The Use of Ceramic Products in the Embellishment of Buildings

By CLAUDE BRAGDON

THE production of ceramics, while perhaps the oldest of all the useful arts practised by man, an art with a magnificent history, has at no time fallen into disuse; it seems at present, moreover, to be entering upon a new era. It is more alive to-day, more generally, more skilfully — I wish I might add, more artfully — practised than ever before. Its recent inclusion in university curriculums, on the same plane with the various branches of engineering and architecture, is significant of the recognition it is now beginning to receive. It is therefore of interest to all architects, in view of the increasing importance of ceramics in buildings, to consider the ways in which these materials may best be used.

Looking at the matter in the broadest possible way, it may be said that the building impulse throughout the ages has expressed itself in two fundamentally different types of structure: that in which the architecture — and even the ornament — was one with the engineering; and that in which the two were separable, not in thought alone, but in fact. To the first class belong the architectures of Egypt, of Greece, and Gothic architecture as practised in the north of Europe; to the second belong Roman architecture of the splendid period, Moorish architecture, and Italian Gothic, so called. In the first class the bones of the building were also its flesh; in the second, bones and flesh were in a manner separable, as is proven by the fact that they were separately considered, separately fashioned. Ruined Karnak, the ruined Parthenon, wrecked Rheims, show ornament so integral a part of the construction — etched so deep — that what has survived of the one has survived also of the other; while the ruined Baths of Caracalla, the uncompleted church of S. Petronio in Bologna, and many a stark mosque on many a sandy desert show only stripped skeletons of whose completed glory we can but guess. In them the fabric was a framework for the display of the lapidary or the ceramic art — a garment destroyed, rent, or tattered by time or chance; leaving the bones still strong, but bare.

For brevity let us name that manner of building in which the architecture is the construction, *inherent* architecture, and that manner in which the two elements are separable, *incrusted* architecture. Let us draw no invidious comparisons between the two, but regard each as the adequate expression of an ideal type of beauty; the one masculine, since in the male figure the osseous framework is more easily discernible; the other feminine, because more concealed and overlaid with a cellular tissue of shining, precious materials, on which the disruptive forces of man and nature are more free to act. I need scarcely say that it is with incrusted architecture that we are almost solely concerned in this discussion, for to this class almost all modern buildings perforce belong. It is a necessity dictated by the materials that we have come to employ, and by our methods of construction.

All important modern buildings follow practically one method of construction: a bony framework of steel — or of concrete reinforced by steel — filled in and subdivided by concrete, brick, hollow fire-clay, or some of its substitutes. To a construction of this kind some sort of an outer encasement is not only æsthetically desirable, but practically necessary. It usually takes the form of stone, face-brick, tile, stucco, or some combination of two or more of these materials. Of the two great types of architecture, the incrusted type is therefore imposed by structural necessity.

The enormous importance of ceramics in its relation to architecture thus becomes apparent. They minister to an architectural need instead of gratifying an architectural whim. Ours is a period of incrusted architecture — one which demands the enrichment of surfaces and the encasement, rather than the exposure, of structure. For these purposes there are no materials more apt, more adaptable, more enduring, richer in possibilities, than the products of ceramic art.

These products are easily and inexpensively produced of any desired shape, color, and texture; their hard, dense surface resists the action of the elements, is not readily soiled, and once soiled is easily cleaned; and being fashioned by fire they are fire resistant.

So much, then, for the practical demand, in modern architecture, of the products of ceramic art. The æsthetic demand is not less urgent and is as admirably met.

When, in the sixteenth century, the Renaissance spread from South to North, color was practically eliminated from architecture. The Egyptians had had it, hot and bright as the sun on the desert; we know that the Greeks made their Parian marble glow in rainbow tints; Moorish architecture was nothing if not colorful; and the Venice Ruskin loved was fairly iridescent — a thing of fire opal and pearl. In Italian Renaissance architecture, up to its latest phase, the color element was always present; but it was snuffed out under the leaden colored northern skies. Paris is gray, London is brown, New York is white, and Chicago the color of cinders. We have only to compare them to yellow Rome, red Siena, and pearl tinted Venice to realize how much we have lost in the elimination of color from architecture. And we are coming to realize it. Only remember how important a part color played in the Pan-American Exposition, what increased importance it assumed in the recent San Francisco Exposition, where, wedded to light, it became the dominant note of the whole architectural concert. These great expositions, in which architects and artists are given a free hand, are in the nature of preliminary studies in which these functionaries sketch in transitory form the things they desire to do in more permanent form. They are forecasts of the future — a future which in certain quarters is already beginning to realize itself. It is, therefore, probable that the next development in architectural art will be in this direction — toward color. I can at least give my personal testimony to that effect.

Several years ago, in the Albright Art Gallery in Buffalo — a building of a severely classic type — I noted a single doorway whose white marble architrave had been stained with different colored pigments by Francis Bacon, and it made the rest of the place seem so cold and dull that I decided then and there that architecture without the help of polychromy was architecture incomplete.

Mr. Bacon had spent many years studying the remains of Greek architecture in Asia Minor and elsewhere, and he once showed me a fragment of an antefix from the Temple of Assos in which the applied color was still pure and strong. Why should we not also try to introduce color into our buildings, as an added element of interest and charm?

It goes without saying that ceramic products are ideal for this purpose. In them nearly the whole gamut of the spectrum is available to the architect. The colors do not change nor fade, and they possess a beautiful quality. Our craftsmen and manufacturers of face brick, architectural terra cotta, and colored tile, after much costly experimentation, have succeeded in producing these ceramics of a high order of excellence and intrinsic beauty: they can do practically anything demanded of them; but from that quarter where they would reap the greatest commercial advantage — the field of architecture — there is all too little demand. The architect, who should lead, teach, and dictate in this field, is content to learn and follow instead. This has led to an ignominious situation — ignominious, I mean, to the architect. He has come to require of the manufacturer — when he requires anything at all — assistance in the very matter in which he should assist: the determination of color-design. It is no wonder that the results are often bad, and therefore discouraging. The manufacturers of ceramics welcome cooperation and assistance on the part of the architect, with an eagerness which is almost pathetic, on those rare occasions when assistance is offered. Such, at least, has been my own experience.

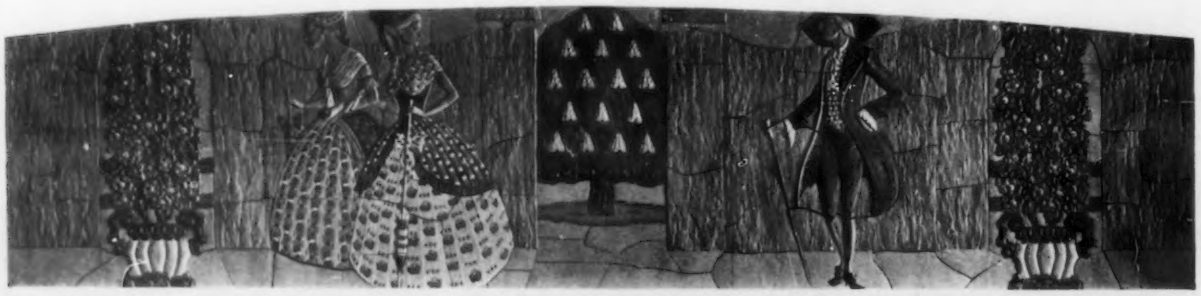
But the architect is not really to blame: the reason for his failure lies deep in his general predicament of having to know a little of everything, and to do a great deal more than he can possibly do well. To cope with this, if his practice warrants the expenditure, he surrounds himself with specialists in various fields, and assigns various departments of his work to them. He cannot be expected to have on this staff a specialist in ceramics, nor can he, with all his manifold activities, be expected to become such a specialist himself. As a result, he is usually content to let color problems alone, for they are merely another complication of his already too complicated life, or he refers them to some one who he thinks ought to know — a manufacturer's designer — and O.K.'s almost anything that may be submitted to him.

This explanation is not offered in apology for the architect's attitude, but in justice to him. Of course the ideal architect would have time for every problem, and solve it supremely well; but the real architect is all too human; there are depressions on his cranium where bumps ought to be; moreover, he wants a little time left to energize in other directions than the practice of his craft.

One of the functions of architecture is to reveal the inherent qualities and beauties of different materials by their appropriate use and tasteful display. An onyx staircase on the one hand and a Portland cement high altar on the other alike violate this function of architecture. Make your high altar of onyx and lapis-lazuli and your staircase of Portland cement, and you have obeyed, not ignored, that beautiful necessity which decrees that precious materials should serve precious uses, and common materials should serve utilitarian ends. Now color is a precious thing, and its highest beauties can only be brought out by contrast with broad, neutral tinted spaces, — that is, by isolation. The interior walls of a medieval cathedral never competed with its windows, and, by the same token, a riot of polychromy all over the side of a building is not as effective, even from a chromatic point of view, as though it were confined, say, to an entrance and a frieze. Gilbert's witty phrase is applicable here:

> "Where everybody's somebody, nobody's anybody."

Let us build our walls, then, of stone, or brick, or stucco, for their flat surfaces and neutral tints conduce to that repose so essential to good architectural effect; let us not rest content with this, however, but grant to the eye the delight and contentment which it craves by color and pattern placed at those points to which it is desirable to attract attention, for these things serve the same æsthetic purpose as a tiara on the brow of beauty, or a ring on a delicate white hand. But just as jewelry is best when it is most individual, so the ornament of a building should be in keeping with its general character and complexion. A color scheme should not be chosen at random, but dictated by the prevailing tone and texture of the wall surfaces with which it should harmonize as inevitably as the blossom of a bush with its foliage. This prevailing tone will inevitably be either cold or warm, and the color scheme must just as inevitably be either cold or warm; that is, there must be a preponderance of cold colors over warm, or *vice versa*. Otherwise the eye will suffer just that order of uneasiness which comes from the contemplation of two equal masses, whereas it experiences an undeniable satisfaction in proportionate unequals as the elements of a composition.



Panel Designed by Knud Laub and Franz Helving, Café Savarin, New York. John J. Petit, Architect

Nothing will take the place of an instinctive color-sense, but even that needs the training of experience, if the field be new, and will be aided by a few general principles of all but universal application.

First of all it should be remembered that the intensity of color should be carefully adjusted to its area. It is dangerous to try to use high, pure colors, unrelieved and uncontrasted, in large masses; but the brightest, strongest colors may be used with impunity in units of sufficiently restricted size. For harmony, as well as richness, the so-called law of complementaries is the best of all guides.

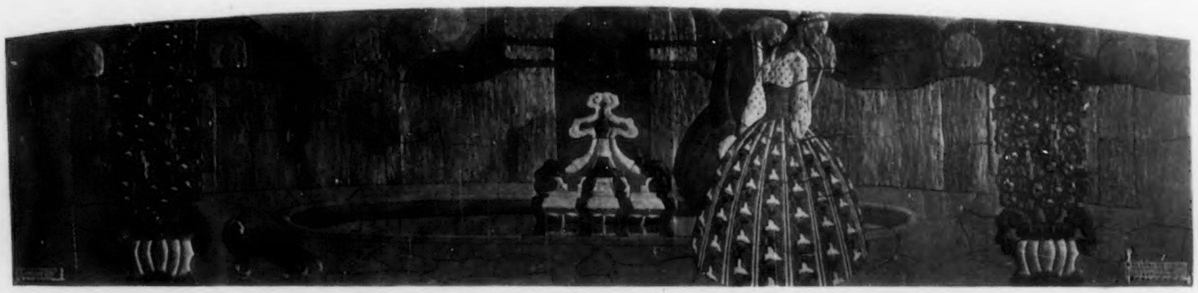
Another important consideration with regard to color dwells in those optical changes effected by distance, and the relative visibility of different colors and combinations of color as the point of sight recedes. In general, they seem to merge into one another, and all the values to lower, but not all equally. Yellow loses itself first, tending toward white; the greens and blues efface themselves next, and the reds last of all. Another curious effect of distance is to disintegrate secondary colors into their primaries and to make the complementaries emerge. A knowledge of these and kindred facts will save the architect from many disappointments and enable him to obtain wonderful chromatic effects by simple means.

Many architects unused to color problems design their ornament with very little thought about the colors which they propose to employ, making it an after-consideration; but the two things should be considered together for the best final effect. Color is capable of making surfaces advance toward or recede from the eye, just as modeling does; and for this reason, if color is used, a great deal of modeling may be dispensed with. If a receding color is used on a recessed plane, it may deepen the plane unduly; while, on the other hand, if a color which refuses to recede, like yellow, for example, is used where depth is wanted, the receding plane and the approaching color neutralize each other, resulting in an effect of flatness not intended. The beginner should not complicate his problem by combining color with high relief modeling, bringing in the element of light and shade. He should leave that for older hands and concern himself rather with flat or nearly flat surfaces, using his modeling much as the worker in *cloisonné* uses his little rims of brass — to limit and define each color within its own allotted area. Then, as he gains experience, he may gradually enrich his pattern by the addition of the element of light and shade.

Now as to certain general considerations in relation to the appropriate and logical use of ceramics in the construction and adornment of buildings, exterior and interior. In our northern latitudes care should be taken that ceramics are not used in places and in ways where the accumulation of snow and ice render the joints subject to alternate freezing and thawing; for in such case, unless the joints are protected, the units will work loose in time. On vertical surfaces such protection is not necessary: the use of ceramics of the finer and more delicate sort should therefore be confined for the most part to such surfaces; for friezes, panels, door and window architraves, and the like. When it is desirable for æsthetic reasons to tie a series of windows together vertically by means of some filling of a material different from that of the body of the wall, colored tiles or brick pattern work lend themselves admirably to the purpose — better than wood, which rots, than iron, which rusts, than bronze, which turns black, and than marble, which soon loses its color and texture in exposed situations of this sort.

On the interior of buildings the most universal use of architectural ceramics is, of course, for floors, and with the non-slip devices of various sorts which have come into the market they are no less good for stairs. There is nothing better for wainscoting, and in fact for any surface whatsoever subject to soil and wear. The one material combines permanent protection and permanent decoration. But with the zeal of the convert, the use of ceramics may be overdone. I recall entire rooms of colored tile — floors, walls, ceilings — which are less successful than if a variety of materials had been employed. It is just such variety, each material treated in a characteristic, and therefore different, way, that gives charm to so many foreign churches and cathedrals: walls of stone, floors of marble, choir-stalls of carved wood, and rood-screen of metal; it is like an orchestra of contrasted instruments as compared with a group of mandolin players or a saxaphone sextette.

Ceramics should never invade the domain of the plasterer, the mural painter, the cabinet maker. They have, as regards architecture, a distinct and honorable function. This function should be recognized, taken advantage of, but never overpassed. They offer opportunities large, but not limitless. They constitute one instrument of the orchestra of which the architect is the conductor, an instrument beautiful in the hands of a master, and doubly beautiful in concert and contrast with those other materials which make that music in three dimensions — architectural art.

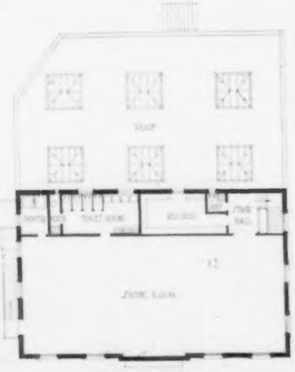


Panel Designed by Knud Laub and Franz Helving, Café-Savarin, New York. John J. Petit, Architect

PRATT STATION POST OFFICE, BROOKLYN, N. Y.

SHAMPAN & SHAMPAN, ARCHITECTS

GENERAL VIEW OF EXTERIOR



SECOND FLOOR PLAN

DETAIL OF ENTRANCE

FIRST FLOOR PLAN

Details of Italian Renaissance Architecture

MEASURED DRAWINGS BY MAURICE P. MEADE

IN probably no other architectural style was more attention paid to the perfection of detail than in the Italian Renaissance, and in this series of plates and those to follow a selection of the simpler details, such as architraves, bases, doorways, etc., has been made to illustrate the great care with which these elements were executed.

The first plate shows a detail of the central doorway to the Church of San Agostino in Rome. The façade of this church is of travertine taken from the Colosseum, and the doorway is of marble. As is true with most of the smaller churches in Rome, it is located on a narrow thoroughfare, but fortunately the architect set the building back from the street and approached the main entrance by a grand flight of stairs extending across the entire width of the façade. The flanking doorways are much simpler in detail and smaller in proportion than the central doorway, but compose well with it.

Church of San Agostino, Rome

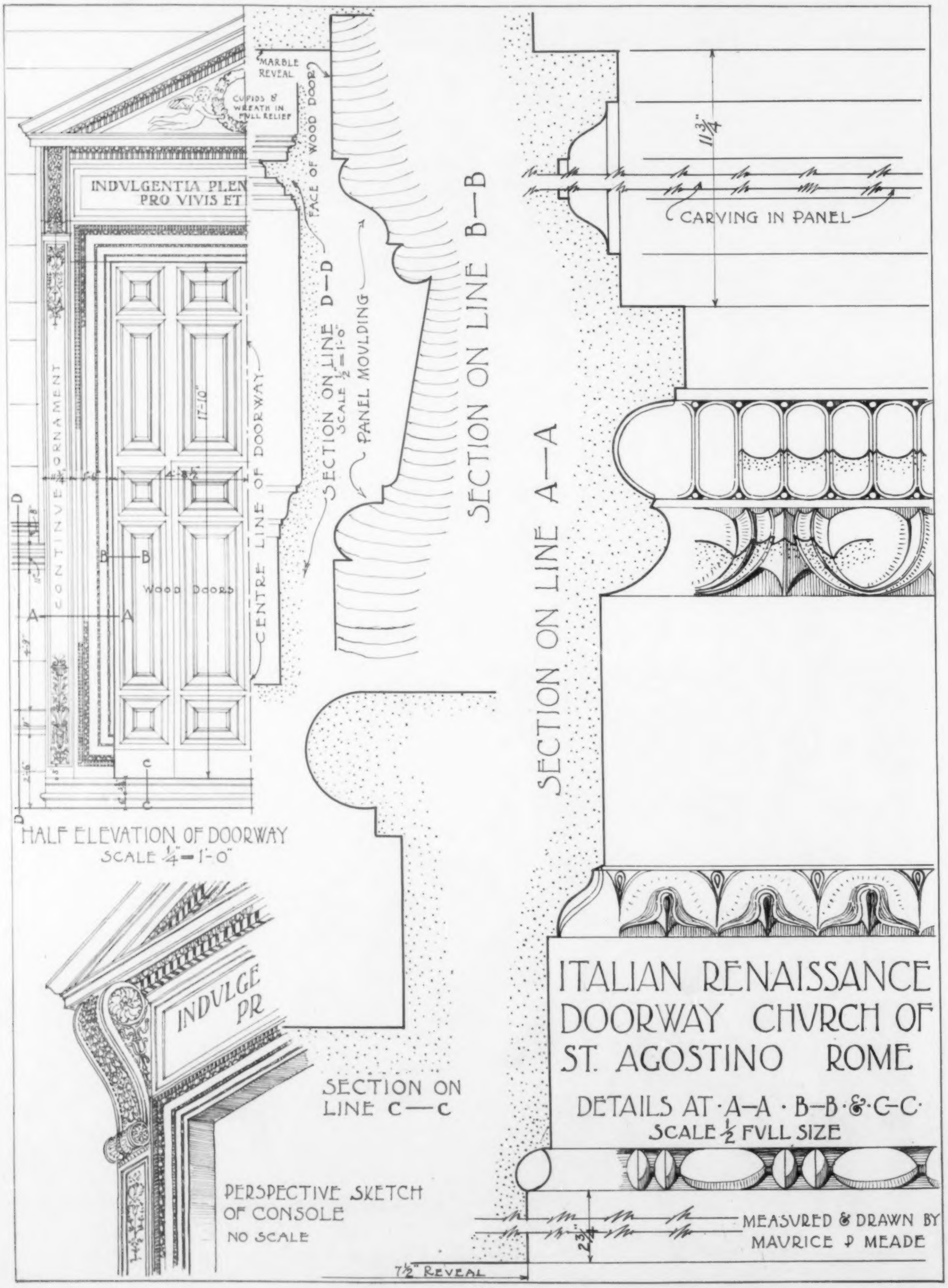
The architrave shows a distinct variation from the usual in the character of its mouldings. The console, which is richly carved on the face and sides, is also unusual in that it butts the soffit of the horizontal facia to the pediment without the bed mould cap breaking around its top. The church is attributed to Baccio Pontelli and was completed about 1483.

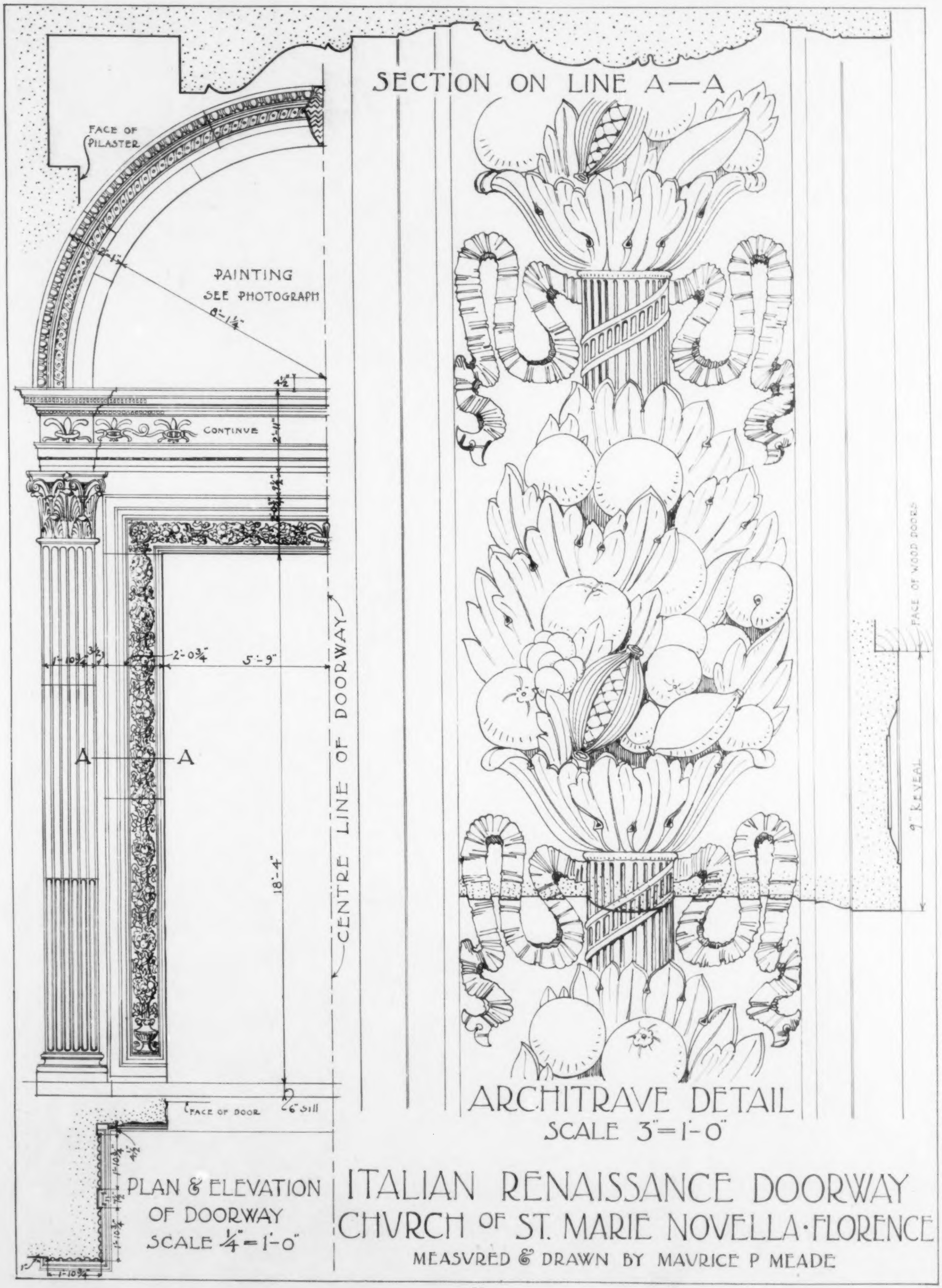
The second plate shows a detail of the doorway to the Church of Santa Maria Novella in Florence, which is attributed to Leon Battista Alberti. As in nearly all doorways of this period, the doors are set into rebated stone jambs without any wood frame.

The third plate is a detail of a doorway to a house in the Via del Gesù, Rome, generally conceded to be one of the most beautiful Renaissance doorways in Rome.

Doorway of House in Via del Gesu, Rome

Doorway of Church of Santa Maria Novella, Florence


ITALIAN RENAISSANCE DOORWAY CHURCH OF ST. AGOSTINO ROME
DETAILS AT ·A–A · B–B ·&·C-C·
SCALE ½ FULL SIZE
MEASURED & DRAWN BY MAURICE P MEADE
HALF ELEVATION OF DOORWAY
SCALE ¼"=1'-0"
INDVLGENTIA PLEN
PRO VIVIS ET
MARBLE REVEAL
CUPIDS & WREATH IN FULL RELIEF
CONTINUE ORNAMENT
CENTRE LINE OF DOORWAY
WOOD DOORS
17'-10"
4'-8½"
A
B
C
D
FACE OF WOOD DOOR
SECTION ON LINE D—D
SCALE ½"=1'-0"
PANEL MOULDING
SECTION ON LINE B—B
SECTION ON LINE A—A
CARVING IN PANEL
11¾"
SECTION ON LINE C—C
PERSPECTIVE SKETCH OF CONSOLE
NO SCALE
INDVLGE
PR
2¾"
7½" REVEAL



ITALIAN RENAISSANCE DOORWAY
CHVRCH OF ST. MARIE NOVELLA · FLORENCE
MEASVRED & DRAWN BY MAVRICE P MEADE

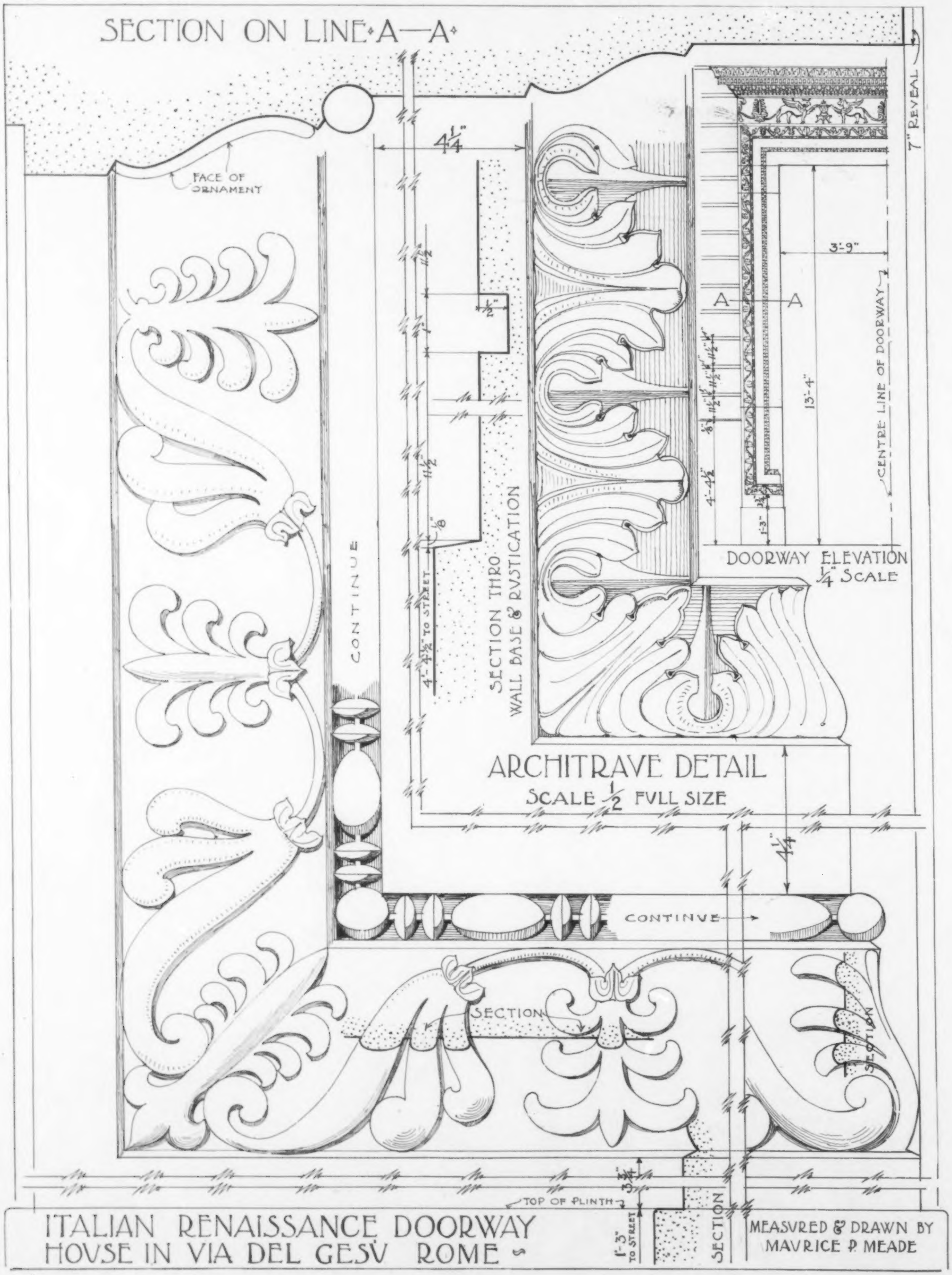

SECTION ON LINE·A—A·
FACE OF ORNAMENT
4 1/4"
1/2"
1 1/2"
1 1/2"
1/8
4'-4 1/2" TO STREET
CONTINUE
SECTION THRO WALL BASE & RUSTICATION
7" REVEAL
3'-9"
A
A
13'-4"
CENTRE LINE OF DOORWAY
4'-4 1/2"
1'-3"
DOORWAY ELEVATION 1/4" SCALE
ARCHITRAVE DETAIL
SCALE 1/2 FULL SIZE
1 1/4"
CONTINUE
SECTION
SECTION
TOP OF PLINTH
3 1/4"
1'-3" TO STREET
SECTION
ITALIAN RENAISSANCE DOORWAY
HOUSE IN VIA DEL GESU ROME
MEASURED & DRAWN BY
MAURICE P. MEADE

PLATE DESCRIPTION

Taft School, Watertown, Conn. Plates 1–3. The school buildings form a picturesque and imposing group, and their rambling form is strongly reminiscent of the medieval schools of England. The material is brick, with trimmings of concrete stone. The main entrance is under the tower, with an arch leading directly into the lobby from the terrace, and a flight of steps leading down to the lower grade on the other side of the building. The tower is the chief feature of the exterior, dominating the silhouette from most points of view. Many of the other exterior features present considerable interest, notably the grouping of the headmaster's house with the block containing the great hall, with the master's own entrance where the two blocks meet. The interior also possesses many notable features. The tower hall is a spacious room, some 28 feet square, with walls of irregularly surfaced plaster, and stone door and window trim. The ceiling is of plaster with oak beams. On one side is a fireplace in an ingle, and opposite is the door to the main stair hall, from which the dining hall, or refectory, under the study hall, is entered. The study hall is 38 feet wide and 55 feet long, with a coved plaster ceiling divided by bands of ornament. The lower part of the walls is paneled, and at one end is a musicians' gallery. The living room of the master's house is paneled in oak, with book shelves on the wall opposite the windows. The mantel is derived from Elizabethan prototypes. The ceiling beams are of ornamental plaster.

Second Unitarian Church, Brookline, Mass. Plates 4, 5. The new meeting-house of the Second Unitarian Society is located on Beacon street, near Coolidge Corner. Its architecture is derived from the New England Georgian examples, with some suggestions from English work. The building is of red brick, with a portico of Ionic columns. The interior, with its gallery and its white, high backed pews, also recalls the churches of the Revolutionary period, but with some modifications. The chancel steps are of white marble and the floor of black and white mosaic tiles. In the center of the chancel is a marble baptismal font, flanked by the pulpit and reading desk. Behind the latter is the organ, hidden by a screen, and above the minister's room is the gallery for the choir. The walls in the interior are a warm gray, with tan curtains at the windows, and red carpet and cushions in the pews.

Ceramic Engineering Building, University of Illinois, Champaign, Ill. Plates 6, 7. The materials of the building are brick and terra cotta, in accordance with its purpose. The cornice and its brackets are of copper. A remarkable innovation is the grading of the brick, which is a light brown at the bottom of the building and nearly black at the top. The grading is not apparent in the illustrations or to a casual observer, but gives a sunny and sparkling effect to the wall that adds greatly to its interest. The grading was accomplished by the use of different colors of bricks from the same factory, tied together by the use of a light buff mortar. The frieze is formed of brick laid in pattern, with considerable variation in color, and tiles are used as ornament in the spandrels.

House of Philip R. Mallory, Esq., Rye, N. Y. Plates 11–14. This house is located on the crest of a hill, on the west side of Forest avenue, commanding a splendid view of Long Island Sound. The style adopted is an adaptation of Elizabethan half-timber work, following ancient methods of construction, with the addition of modern waterproofing materials and processes. The frame is of solid oak timbers, 6 by 8 inches, hand hewn, mortised and tenoned together, and held by oak pins. The panels are filled with common brick laid in patterns. The overhang of the second story over the living room is supported by the projection of the ceiling beams, which are solid 8 by 10 inch oak timbers. The main entrance to the building is at the rear, at the top of a driveway winding up the hill from the road. The natural grades were also retained to the fullest extent, except where terracing and road-making was necessary. The plan of the house is informal, being designed with a view to comfort and suitability to the location. The living room projects on the southwest, and the dining room on the southeast, each occupying a wing with light and air on three sides. The den is on the northwest side, adjoining the entrance, and the service wing on the northeast. On the second floor there are three separate sleeping apartments. The first is the master's quarters, consisting of bedroom No. 1, with its bath, dressing room, boudoir, and porch. The second is the children's quarters, bedrooms 3 and 4, with a bath and porch. The third section is for guests, consisting of bedrooms 2 and 5, with a bath and a small porch. The servants' quarters are in the third story and are reached by a separate stairway leading from the pantry.

House of Alexander H. Gunn, Esq., Wellesley, Mass. Plates 15, 16. The construction of this house is brick veneer over frame, the intention being to keep down the expense to a minimum, while affording the maximum of comfort for a small family. A cheap grade of rough surfaced, water struck brick was used, laid in equally rough mortar. In the main rooms of the first floor the ceiling timbers were left exposed, the spaces between being plastered. The finish throughout is the simplest type of hard pine, stained brown for the most part, many of the walls being given only one coat of plaster, stained to harmonize with the woodwork. The main chimney was located as an element in the exterior treatment, this being almost the only expense incurred for the sake of outward appearance. Cost slightly over $6,000.

House of J. L. Sullwold, Esq., St. Paul, Minn. Plates 17, 18. The house is set in a grove of trees, 60 feet back from a boulevard, making it possible to use the terrace facing the road without loss of privacy. The material is brick and hollow tile, the brick being laid in Dutch bond with joints 1 inch wide. The plastering of the interior and the stucco of the exterior on the second story are applied directly to the tile, an air space 1 inch wide being kept in the interior of the wall. The roof is of shingles, stained in assorted shades and mixed in laying. The cost of the house was about $10,000, or 24 cents per cubic foot.

EDITORIAL COMMENT AND NOTES FOR THE MONTH

BEGINNING with this, the January 1917 number of our publication, its title, which for twenty-five years has been The Brickbvilder, is changed to THE ARCHITECTURAL FORUM. The ownership and management remain the same. Mr. Arthur D. Rogers will continue his work of more than twenty years as Managing Editor.

Since a new title has been adopted for our publication it seems probable that our readers will be interested to know some of the reasons that have influenced us in making the change. While it may appear that the title is of comparatively minor importance, and that a publication might depend solely upon its editorial merits for recognition in its field, there is still an undoubted advantage in expressing in the title the full scope of the work. Moreover, the former title did not seem to lend itself naturally to the development of our work along broader lines — a development for which we have been building and which we now feel ourselves capable of undertaking.

In exactly what respect and in what measure the nature of our work will be altered has not as yet been definitely determined, but our whole purpose is to make our publication of larger value to the profession we serve, and of ever increasing interest to those who are served by that profession. In our endeavor to meet what we consider to be a larger opportunity for service in the architectural publishing field it is obviously unnecessary that we should in any measure abate our interest in the ideals upon which we have built. Architecture in materials of clay has been a distinct feature of our work in the past, and will continue to be so in the future. The place that these materials occupy and will continue to occupy in the building world is secure. That we shall present within our pages buildings that have been executed in other materials cannot detract from the inherent beauty and stability possessed by brick, terra cotta, and tile. These materials, rich in their traditions and better to-day than ever before, need no sponsor.

Within the domain of an architectural publication, and one of its recognized functions, is the presentation of data, in the form of articles and illustrations, that shall record progress made in plan, design, construction, materials, and business administration; and of no less importance is an unbiased and fearless discussion of the ethics that should govern the practice of architecture. A work of this nature, if carried on with intelligence and energy, will have the largest value for the architect, and it must also, if properly directed, command a growing interest among laymen, or among such of them as are concerned in a work that is so vitally important to our well-being as a people.

The time is undeniably at hand when the value of good architecture, in its broadest interpretation, should be better understood; and it should be made known that only a true, virile art can be depended upon to meet properly the manifold needs of a people if we are to have an architecture that shall adequately represent the intelligence and wealth of this country. An art worth while is not to be found in card indexes and departments organized to render first aid to the prospective client.

It is in the furtherance of a work of broader scope that we see a larger opportunity in architectural journalism; and along these lines ours will be laid, although, as previously announced, no new features will be introduced unless their desirability has been carefully considered. If our vision is a true one, we do not covet the entire opportunity; on the contrary, we shall be content to do our part as best we can in bringing to those who practise architecture the help of constructive thought and to architecture itself that larger recognition to which it is justly entitled. That this work can be better undertaken under the new title than under the old is our belief. — THE EDITORS.